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SHARP 14BN4 SERVICE MANUAL

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SHARP SERVICE MANUAL
维修说明书

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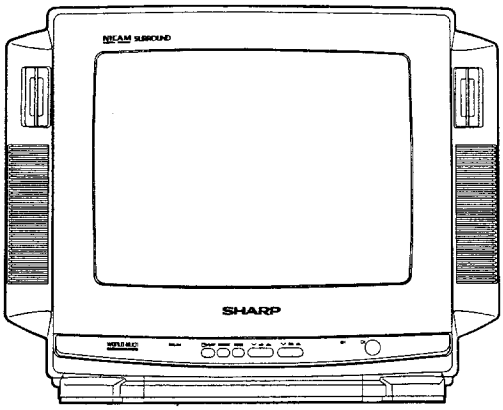

21 SYSTEM COLOUR TELEVISION
21制式 彩色电视机

Chassis No. 21B

MODEL 型号 14BN4

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

为了用户安全起见(根据一些国家的安全规程的需要),应将电视机保持于最初的状态，而且只能使用与指定物相同的部件。

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WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.

To prevent electric shock, do not remove cover. No user — serviceable parts inside. Refer servicing to qualified service personnel.

警 告

该电视机底板的有些部分通电。当维修本机底板时，请在电源线插头和电源插座之间使用隔离变压器。

为了防止电击的危险，不要去拆下机盖。在里面的部件，不是使用者所能维修的，必须委托够格的维修人员来进行维修。

ELECTRICAL SPECIFICATIONS

Power Input	110 V~240 V AC, 50/60 Hz
Power Consumption	76 W
Convergence	Self Converging System
Focus	Bi-Potential, Uni-Potential Electrostatic
Sweep Deflection	Magnetic
Intermediate Frequencies	
Picture IF Carrier	38.9 MHz
Sound IF Carrier	
6.5MHz	32.4 MHz
6.0MHz	32.9 MHz
5.5MHz	33.4 MHz
4.5MHz	34.4 MHz
Colour Sub-Carrier	
PAL/NTSC	34.47 MHz
SECAM	34.494/34.65 MHz
NTSC	35.32 MHz
Audio Power Output Rating	4.0 W x 2 (MPO)
Speaker	
Size	8 cm Round x 2 pcs
Voice Coil Impedance	16 Ω at 400 Hz

Aerial Input Impedance				75 Ω Unbalanced
Receiving Channels				
• PAL-B/G, SECAM-B/G				
VHF		E2	thru	E12
UHF		21	thru	69
CATV		S1	thru	S3,
		M1	thru	M10
		S4	thru	S20
• PAL-D/K, SECAM-D/K				
VHF		R1	thru	R12
UHF		21	thru	69
• PAL-I				
VHF	(IRELAND):	B	thru	J
UHF	(U.K., H.K.):	21	thru	69
• NTSC-M				
VHF	(US):	2	thru	13
	(JAPAN):	1	thru	12
UHF	(US):	14	thru	79
	(JAPAN):	13	thru	62
CATV		A-8	thru	A-1,
		A	thru	W

Receiving Frequency			
VHF	48.25 MHz	thru	295.25 MHz
UHF	471.25 MHz	thru	863.25 MHz

Specifications are subject to change without prior notice.

电路规格

电源输入	110~240 V 交流 50/60Hz
功率消耗	76W
聚焦	自聚焦系统
焦点	双电位、单电位静电焦点
扫描偏转	磁致偏转
中频	
图象中间载频	38.9MHz
声音中间载频	
6.5MHz	32.4MHz
6.0MHz	32.9MHz
5.5MHz	33.4MHz
4.5MHz	34.4MHz
彩色副载波	
PAL/NTSC制式	34.47MHz
SECAM制式	34.494/34.65MHz
NTSC制式	35.32MHz
音响额定输出功率	2X4.0W (MPO)
扬声器	
尺寸	8㎝圆型× 2个
音圈阻抗	16Ω(400Hz时)

天线输入阻抗			75Ω非平衡式
接收频道			
●PAL-B/G, SECAM-B/G			
VHF(甚高频)	E2~E12频道		
UHF(超高频)	21~69频道		
CATV(有线闭路电视)	S1~S3频道		
	M1~M10频道		
	S4~S20频道		
● PAL-D/K, SECAM-D/K			
VHF(甚高频)	R1~R12频道		
UHF(超高频)	21~69频道		
●PAL-I			
VHF(甚高频)	(爱尔兰): B~J频道		
UHF(超高频)	(英国、香港): 21~69频道		
●NTSC-M			
VHF(甚高频)	(美国): 2~13频道		
	(日本): 1~12频道		
UHF(超高频)	(美国): 14~79频道		
	(日本): 13~62频道		
CATV(有线闭路电视)	A-8~A-1, A~W		

接收频率			
VHF(甚高频)	48.25~295.25MHz		
UHF(超高频)	471.25~863.25MHz		

规格如有改变将不再预先通知。

IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be done by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10k ohm Resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:

1. When repairing the circuit, be sure not to increase the high voltage to more than 25.3 kV, (at beam 0 μA) for the set.
2. To keep the set in a normal operation, be sure to make it function on 22.0 kV ± 1.5 kV (at beam 800 μA) in the case of the set. The set has been factory — Adjusted to the above-mentioned high voltage.
   ∴ If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators etc.

维修注意要点

本电视机应只能由够格的维修人员来维护和修理。

高电压系统和显象管的维修

当维修高电压系统时，在显象管金属部分和第2阳极引线之间，用一绝缘（象测试探针等）和一10千欧姆的电阻串联连接，从而除去高电压系统的静电。(交流电源插头应和交流电源断开。)

1. 本电视机的显象管使用整体内爆保护。
2. 为安全的连续性起见，更换时必须使用相同型号的显象管。
3. 不要抓住显象管的颈部来将其提起。
4. 只有在防震屏面磨损时，和高电压系统彻底放电之后，才能来操作显象管。

X－射线

本电视机被设计成一些X－射线保持在绝对最小。但是由于故障或在修理时，有可能产生在靠近区域长期暴露于辐射之下的危险，因此，必须遵循下列预防措施。

1. 当修理电路时，一定不要使电视机的高电压超过25.3kV。(电流为0μA)
2. 要使电视机操作正常，必须使电视机在高电压为22.0kV±1.5kV(电流为800μA) 的情况下工作。本电视机在出厂之前已被调整为上述的高电压。
   在进行修理之后，可能会产生高电压波动的结果。因此在修理结束时，千万不要忘记检查一下高电压是否波动。
3. 不要使用没经许可类型和商标的显象管来代替，这样会产生超过标准的X－射线辐射。

在归还电视机之前

在将电视机归还给用户之前，请进行下列的安全检查。

1. 检查机底板和电视机其它金属部件之间的全部导线的包皮，确认导线没有折叠、没有和其它金属部件短接。
2. 检查所有防护装置，象非金属的控制旋钮、绝缘青壳纸、机壳后盖、调整器和门盖或防护屏、隔离电阻－电容网、机械隔离器等。

SERVICE ADJUSTMENT

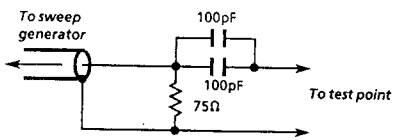
■ PIF/AFT/AGC ADJUSTMENT

Adjusting Conditions	Adjusting Procedures

1. Tuner IFT Coils

The tuner has been factory preset (no adjustment is needed)

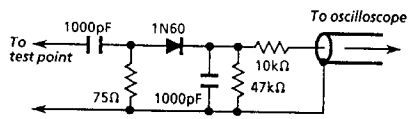
1. Set reception channel at E10 (When such signal is not available, set V_T voltage at 10V in V_H band.)
2. Connect sweep generator's output to the test point of tuner, by using a 75Ω DC cut probe.



Connection Diagram of 75Ω DC Cut Probe.

Note: The sweep generator's probe should be grounded closely to the tuner test point.

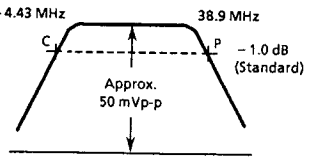
3. Output level of sweep generator: 85 dB
4. Connect response lead (low impedance probe with detector) to TP201 (collector of Q201).



Connection Diagram of Low Impedance Probe (with Detector).

5. PIF AGC:
   Apply DC 4.0V to TP202 (pin (48) of IC801).
6. RF AGC:
   Apply DC 4V to the tuner AGC terminal.

1. Adjust the tuner IF coils to obtain the waveform as shown figure below.



Adjust so that "P"and "C" are at the same level.

保养调试

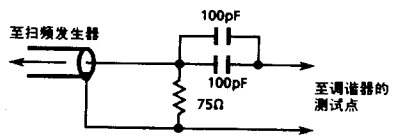
■ PIF/AFT/AGC的调试

调 试 条 件	调 试 方 法

1. 调谐器IFT线圈

该调谐器出厂前已作预调(无重新调试之必要)

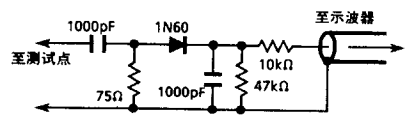
1. 置接收频道于E-10位置(电视机在无信号接收状态时，设V_T电压于V_H频带的10V。)
2. 用75Ω直流截断探针电路，将扫频发生器输出端连接于调谐器的测试点。



75Ω直流截断探针电路连接图

注意：扫频发生器的接地线必须接地于测试点附近。

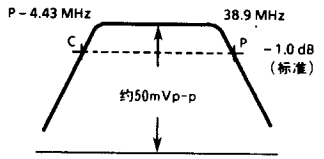
3. 扫频输出电平：85dB。
4. 连接响应引线(检波器的低抗阻探针)于TP201(Q201的集电极)。



低抗阻探针(带检波器)电路连接图

5. PIF AGC电压设定：
   加4.0V直流电压于TP202(IC801的销(48)。
6. RF AGC电压设定：
   加4V直流电压于调谐器AGC连线端。

1. 调节调谐器IF线圈，以获得下图所示输出波形。



检查"P"及"C"两点是否于相同的电平线上

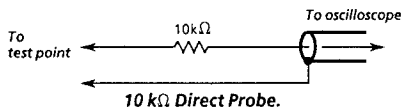
■ PIF/AFT/AGC ADJUSTMENT (Continued)

Adjusting Conditions	Adjusting Procedures

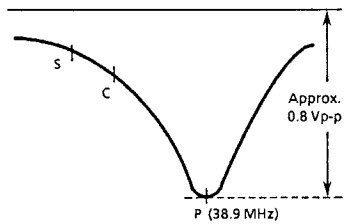
2. P-Detector Adjustment

Adjusting Point
☐ T205: P-Detector coil

1. Connect sweep generator's output to TP203 (pin (46) of IC801).
   - Probe in use: 75Ω DC cut probe
   - Sweep output level: 90 dB
2. PIF AGC:
   Apply 4.0V DC to TP202 (pin (48) of IC801).
3. Have AFT muted (by pressing the preset key to bring in the SEARCH mode).
4. Connect response lead to TP204.
   The response lead in use should be a direct probe with a resistor of 10 kΩ included.



1. Adjust T205 so that 38.9 MHz signal is at maximum (±50 kHz).



* Adjust PIF AGC voltage so that the output waveform is of approx. 0.8 Vp-p.

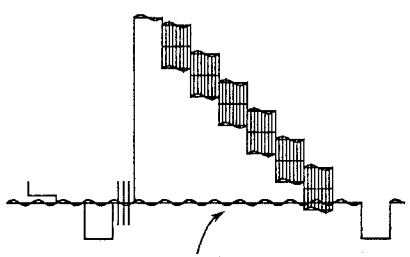
3. AFT Adjustment

Fine Adjustment

Adjusting Point
☐ T205: AFT coil

1. Receive "PAL COLOUR BAR (channel-E12)" signal.
   If channel-E12 signal is not available, it is enough to receive the signal of more than channel-E5 or UHF signal.
   - Signal strength: Over 55dB, Below 80dB
2. Connect the DC power supply to the tuner's V_T (approx. 11V to be applied) to receive channel-E12.
3. Connect oscilloscope to TP401.
   - Oscilloscope range: 0.5 V/div.
   - Sweep time: 20 μsec/div.
   - Synchronization: Horizontal sync.
4. Connect the output of SSG (Standard Signal Generator) to the tuner IF output terminal across a capacitor of 1pF.
   - SSG output: 38.9 MHz ± 5 kHz (non modulated)
   - SSG output level: approx. 85 dB
   * When the preset button is at PST position, AFT is turned off.
   * When the preset button is set at NOR position, AFT is turned on.

1. Press the preset key to adjust the voltage of the DC power supply until there is no beating in the oscilloscope's waveform.
2. Set the preset button at NORMAL position.
3. Adjust T205 so that no beating is caused at the output waveform.



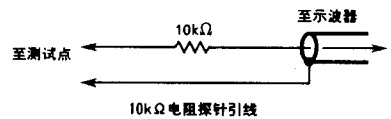
■ PIF/AFT/AGC的调试(接上页)

调 试 条 件	调 试 方 法

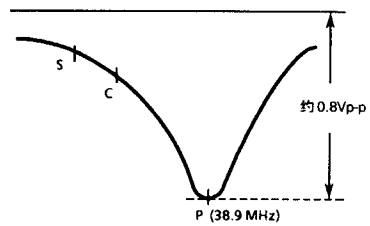
2. P-检波器的调试

调试点
☐T205: P-检波器线圈

1. 连接扫频发生器输出端于TP203(IC801的销(46))。
   - 使用探针：75Ω直流截断探针
   - 扫频发生器输出端电平：90dB
2. PIF AGC电压设定：
   加4.0V直流电压于TP202(IC801的销(48))。
3. 置AFT于静噪状态(触按预设键，使电视机处搜索寻台状态即可)。
4. 连接响应引线于TP204。
   该响应引线应为具有10kΩ电阻的探针。



1. 调节T205，使其信号最大值为38.9MHz(±50kHz)



* 调节PIF AGC电压使其输出电平约达0.8Vp-p。

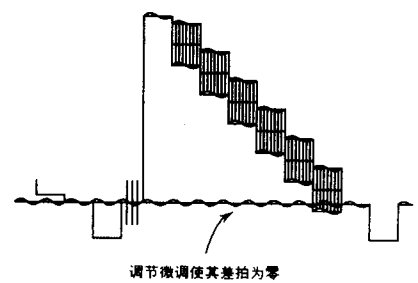
3. AFT调试

微调

调试点
☐T205：AFT线圈

1. 接收"PAL制式彩条(频道－E12)"信号。
   如频道E－12无所需信号出现，可转用频道－E5信号或UHF(超高频)信号。
   - 信号强度：大于55dB，小于80dB
2. 接直流电源于调谐器V_T端(约加直流电压11V)，以接收频道－E12的信号。
3. 将示波器和TP401相接。
   - 示波器测示范围：0.5伏/段
   - 扫频时间：20微秒/段
   - 同步动作：水平同步
4. 通过1pF电容器，并接标准信号发生器(SSG)的输出端与调谐器的IF输出端。
   - SSG输出频率：38.9MHz±5kHz(无调制)
   - SSG输出电平：约85dB
   * 设预设键于PST位置时，AFT关断。
   * 设预设键于NOR位置时，AFT接通。

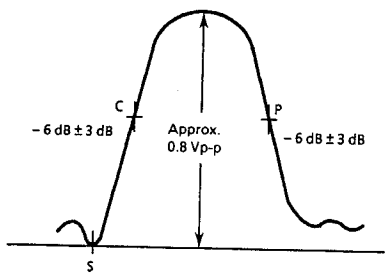
1. 触按预设键，调节直流电源电压，直至示波器上的输出波形表面无差拍出现。
2. 设预设键于NOR位置处。
3. 调节T205，使示波器上的输出波形无差拍出现为止。



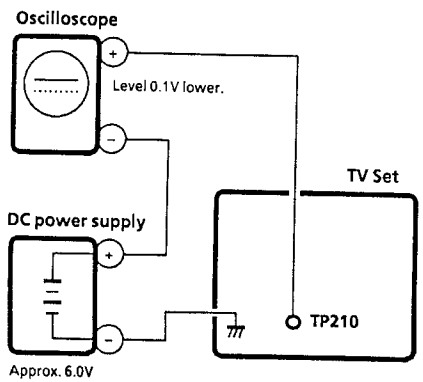
■ PIF/AFT/AGC ADJUSTMENT (Continued)

Adjusting Conditions	Adjusting Procedures

4. PIF Overall Adjustment

1. Receive channel-E10 signal. If channel-E10 signal is not available, set V_T voltage at 10V in V_H band. 2. Connect sweep generator's output to the test point of tuner. ● Probe in use: 75Ω DC cut probe ● Sweep output level: 90 dB 3. Connect response lead to TP204. The response lead in use should be a direct probe with a resistor of 10 kohms included. 4. RF-AGC: Apply approx. 4.0V DC to the tuner AGC terminal. 5. PIF AGC: Apply approx. 4.0V DC to TP202. 6. Connect a 120 ohm damping resistor in parallel to R215, short C243 and C244. 7. Turn off AFT.	1. Adjust IF AGC voltage so that the output waveform is of approx. 0.8Vp-p. 2. Check that the overall waveform is as shown in Figure below. 

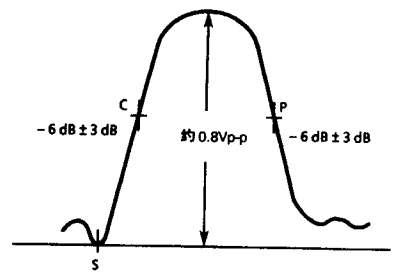
5. RF-AGC Cut-In Adjustment

Adjusting Point ☐ R248: RF-AGC control 1. Keep the AGC Cut-in control near the center position. 2. Receive "COLOUR BAR (channel-E12)" signal. ● Signal strength: 54 dB ± 1 dB (with 50Ω open) 3. Connect the oscilloscope to the tuner's AGC terminal (TP210). ● Range: DC range ● Voltage: 10mV/div. ● Sweep: 10msec./div. * Set the DC power supply to about 6.0V and turn up the oscilloscope range to 10mV (DC).	1. Turn R248 to obtain the highest voltage. 2. Turn R248 slowly in the opposite direction until the voltage drops 0.1V lower than the highest level. 3. Change the antenna input signal to 65dB ± 2dB and make sure there is no noise. Turn up the input signal to 90 — 95dB to be sure that there is no cros-modulation beat. 

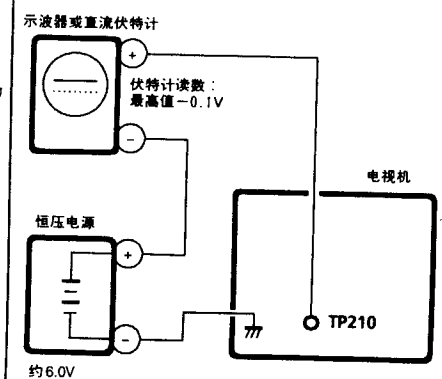
■ PIF/AFT/AGC的调试(接上页)

调 试 条 件	调 试 方 法

4. PIF全波形的调试

1.接收频道－E10信号。 电视机在无该信号接收状态时，设V_T电压于V_H频带的10V。 2.将扫频发生器输出端与调谐器测试点连接。 ●使用探针：75Ω直流截断探针 ●扫频发生器输出电平：90dB 3.连接响应引线于TP204。 该响应引线应为具有10kΩ电阻的探针。 4.RF AGC电压设定： 加约4.0V直流电压于调谐器的AGC连接端。 5.PIF AGC电压设定： 加约4.0V直流电压于TP202。 6.用120Ω的阻尼电阻与R215并连相接，然后将C243和C244短路。 7.关闭AFT：	1.调节IF AGC电压，使其输出电平达至0.8Vp-p左右。 2.确认所得全波形轮廓如下图所示。 

5. RF-AGC接通的调试

调试点 ☐R248：RF-AGC控制 1.设AGC接通控制于其中央近旁之位置处。 2.接收"彩条(频道E－12)"信号。 ●信号强度：54dB±1dB(端接50Ω电阻)。 3.连接示波器于调谐器AGC连线端(TP210)。 ●测定电压：直流范围 ●电压范围：10毫伏/段 ●扫频时间：10毫秒/段 *设示波器直流电源电压约为6.0V，示波器测示范围为10mV(直流)。	1.旋转R248，使伏特计读数达至最高。 2.反方向缓慢旋转R248，让伏特计读数为最高值－0.1V。 3.将天线输入信号电平调至65dB±2dB，并确认其信号输出不带噪声。然后将输入信号电平调至90～95dB，并确认其信号输出波形不带交叉调制拍频。 

■ SUB-SOUND ADJUSTMENT

Adjusting Conditions	Adjusting Procedures
Adjusting Point ☐ **R333: Sub-Sound control** 1. Receive the monaural SYSTEM B/G signal with 50-kHz deviation frequency (100% modulation). 2. Connect the oscilloscope to TP1301.	1. Adjust R333 so that the amplitude of the audio signal at TP1301 be 0.9 Vp-p.

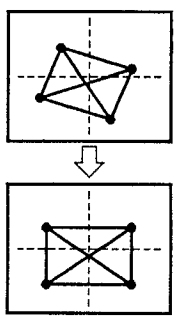
■ NICAM ADJUSTMENT

Adjusting Conditions	Adjusting Procedures

1. 38.9MHz Detection Adjustment

Adjusting Point ☐ **T2102: 38.9MHz Detection coil** 1. Receive the "PAL COLOUR BAR" signal. 2. Connect the oscilloscope to TP2102.	1. Adjust T2102 (IGR unit) so that the video signal component be minimum.

2. 5.85MHz Trimmer Adjustment

Adjusting Point ☐ **C5022: 6.552MHz Trimmer capacitor** 1. Receive the "NICAM i" signal. 2. Connect the oscilloscope to TP5001 and TP5002. 3. Set the oscilloscope to the X-Y mode. Range: 20 mV/div.	1. Adjust C5022 so that the waveform be horizontal. 

1. 5.824MHz Trimmer Adjustment

Adjusting Point ☐ **C5039: 5.824MHz Trimmer capacitor** 1. Disconnect the antenna and connect the frequency counter to TP5003. Probe impedance: Over 1MΩ, below 10 pF. 2. Make TP5004 and TP5005 short-circuited.	1. Adjust C5039 so that the frequency counter read 5824.000 kHz ± 10 Hz.

■ 副声音的调整

调 试 条 件	调 试 方 法
调试点 ☐**R333：副声音控制** 1.接收50kHz偏移频率(100%调制)的单声道B/G制式信号。 2.接示波器于TP1301。	1.调节R333，使TP1301处音频信号的振幅达至0.9Vp-p的规定要求。

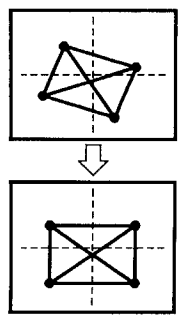
■ NICAM的调整

调 试 条 件	调 试 方 法

1. 38.9MHz检波的调整

调试点 ☐**T2102：38.9MHz检波线圈** 1.接收PAL制式彩条信号。 2.接示波器于TP2102。	1.调节T2102(IGR装置)，使视频信号成分达至最小程度。

2. 5.85MHz调整器的调整

调试点 ☐**C5022：6.552MHz微调电容器** 1.接收NICAMi信号。 2.接示波器于TP5001和TP5002。 3.设示波器于X－Y坐标表示方式。 测试范围：20mV/段	1.调节C5022，使示波器上表示的波形达至水平程度。 

1. 5.824MHz调整器的调整

调试点 ☐**C5039：5.824MHz微调电容器** 1.拆去天线的连接。接计频器于TP5003。 探针抗阻：大于1MΩ；小于10pF 2.短接TP5004和TP5005。	1.调节C5039，使计频器的读数达至5824.000kHz±10Hz的规定要求。

■ 115V LINE ADJUSTMENT

Adjusting Conditions	Adjusting Procedures
Adjusting Point ☐ **R711: 115V Adjustment Control** 1. Set the R711 to 5/10 before supplying power. 2. Receive "MONOSCOPE PATTERN" signal. 3. Set Contrast and Brightness controls at MAX position. 4. Connect DC milliammeter to TP602 and TP603. 5. Using the DC milliammeter, check to see that the beam current is between 700 and 800 μA. Note: In other cases than the above, abjust the sub-contrast control (R420) 6. Connect Digital voltmeter to TP701.	1. Adjust the R711 until the TP701's voltage becomes 115V ± 0.5V.

■ 115V线路调试

调 试 条 件	调 试 方 法
调试点 ☐R711：115V线路调试控制 1.输入电源前，先设R711于其中央(5/10)位置。 2.接收单象管图案信号。 3.设对比度控制和亮度控制于其最大(MAX)位置。 4.接直流毫安安培计于TP602和TP603。 5.用直流毫安安培计检查电流束是否于700～800μA之间。 注： 上述之外之场合，调试副对比度控制(R420)。 6.接数值伏特计于TP701。	1.调节R711，使TP701的电压达至115V±0.5V。

■ VIDEO CHROMA ADJUSTMENT

Adjusting Conditions	Adjusting Procedures

1. CRT Cut-off Adjustment

Adjusting Point ☐ R853: Red Bias control ☐ R859: Green Bias control ☐ R865: Blue Bias control ☐ T602: Screen control (a part of T602) ☐ R857: Green Drive control ☐ R863: Blue Drive control ***Note: Prior to this adjustment, warm up the unit with the beam current of more than 500 μA for more than 30 minutes.*** 1. Receive "MONOSCOPE PATTERN" signal. 2. Push the "P-N" key on the remote controller to make the picture normal. 3. Set Red bias control at MIN position. Set Green bias control at MIN position. Set Blue bias control at MIN position. Set Green drive control at CENTER position. Set Blue drive control at CENTER position. 4. Set the Screen control at MIN position. 5. Set to the AV mode. Make sure the sign disappears and make TP401 and TP402 short-circuited.	1. Slowly turn the Screen control clockwise until the horizontal raster appears slightly, and stop it. 2. Here, one of the three colours (red, blue, green) appears first as the Screen control is turned. So, touching off the Bias control belonging to the first colour, use and move the other two controls so that the horizontal raster becomes white. 3. Turn the Screen control counterclockwise until the horizontal raster disappears, and stop it.

2. White Balance and Back Ground Adjustment

Adjusting Point ☐ R857: Green Drive control ☐ R863: Blue Drive control ☐ R420: Sub-Contrast control ***Note: Prior to this adjustment, warm up the unit with the beam current of more than 500 μA for more than 30 minutes.*** 1. Receive "MONOSCOPE PATTERN" signal. 2. Set the Contrast and Brightness controls at MAX position. 3. Connect beam ammeter to TP601 and TP602. (Full scale: 1 mA)	1. Adjust Sub-Contrast control so that the beam current becomes 800 μA (rough adjustment) 2. Adjust Green Drive control and Blue Drive control so that the colour temperature is at 9300°K. (High beam: 800 μA). 3. Adjust the Contrast control and Brightness control so that the beam current is approx. 200 μA, and check that the colour temperature is at 9300°K. If the temperature is not at 9300°K, go back to **"CRT CUT-OFF ADJUSTMENT"** and repeat the adjustment.

■ 视频 色度信号电路的调试

调 试 条 件	调 试 方 法

1. CRT截止的调试

调试点 ☐R853：红色偏转控制 ☐R859：绿色偏转控制 ☐R865：蓝色偏转控制 ☐T602：画面控制(T602的一部分) ☐R857：绿色激励控制 ☐R863：蓝色激励控制 注意：作此项调试前，先用 500μA 以上的电子束电流为电视机预热30分钟以上。 1.接收"单象管图案"信号。 2.触按遥控器上的"P-N"键，设电视机画面于标准画面状态。 3.设红色偏转控制于最小(MIN)位置。 设绿色偏转控制于最小(MIN)位置。 设蓝色偏转控制于最小(MIN)位置。 设绿色激励控制于中心(CENTER)位置。 设蓝色激励控制于中心(CENTER)位置。 4.设画面控制于最小(MIN)位置。 5.设电视机于AV(声象)状态。确认消去在荧屏上的文字表示，接着将TP401和TP402短路。	1.顺时针方向缓慢地旋转画面控制旋钮，直至荧屏上微弱地出现水平光栅为止。 2.画面控制的调节，最初出现的水平光栅泛显红、绿、蓝三色之一。这时，对最初出现的色彩控制不作调节，而对另外两色彩的控制作顺时针方向的调节，荧屏上的水平光栅会变为白色。 3.反时针方向旋转画面控制旋钮，直至荧屏上的水平光栅完全消失为止。

2. 白色平衡及底色的调试

调试点 ☐R857：绿色激励控制 ☐R863：蓝色激励控制 ☐R420：副对比度控制 注意：作此项调试前，先用 500μA 以上的电子束电流为电视机预热30分钟以上。 1.接收"单象管图案"信号。 2.设对比度控制和亮度控制于其最大(MAX)位置。 3.接电子束安培计(测示范围：1mA)于TP601和TP602之间。	1.调节副对比度控制，使电子束电流达至800μA(粗调)。 2.调节绿色激励控制和蓝色激励控制，使色温达至9300°K。(高电子束：800μA)。 3.调节对比度控制和亮度控制，使电子束电流达至200μA左右。然后，检查色温是否为9300°K。如果这时的色温并非9300°K，则必须回到**"CRT切断调试"**，并重复此项调试。

■ VIDEO CHROMA ADJUSTMENT (Continued)

Adjusting Conditions	Adjusting Procedures

3. Sub-Contrast Adjustment

Adjusting Point ☐ R420: Sub-Contrast control *Note: Prior to this adjustment, warm up the unit with the beam current of more than 500 μA for more than 30 minutes.* 1. Receive "MONOSCOPE PATTERN" signal. 2. Set the Contrast and Brightness controls at MAX position. 3. Connect beam ammeter to TP601 and TP602. (Full scale: 1 mA)	1. Adjust Sub-Contrast control so that the beam current becomes 800 μA.

■ 视频 色度信号电路的调试(接上页)

调 试 条 件	调 试 方 法

3. 副对比度的调试

调试点 ☐R420：副对比度控制 注意：作此项调试前，先用 500μA 以上的电子束电流为电视机加热30分钟以上。 1.接收"单象管图案"信号 2.设对比度控制和亮度控制于其最大(MAX)位置。 3.接电子束安培计(测示范围：1mA)于TP601和TP602之间。	1.调节副对比度控制，使电子束电流达至800μA。

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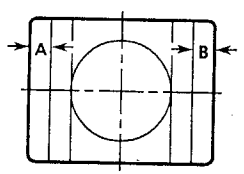
■ DEFLECTION LOOP ADJUSTMENT

Adjusting Conditions	Adjusting Procedures

1. Horizontal Center Adjustment

Adjusting Point ☐ R613: Horizontal Center control 1. Receive the "MONOSCOPE PATTERN (Channel-E5)" signal. *Note: Make this adjustment after the purity and convergence adjustments.*	1. Adjust R613 so that the horizontal center is ensured with A = B. 

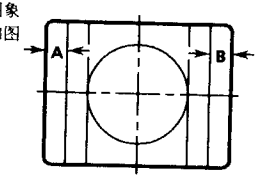
2. Vertical Size Adjustment

Adjusting Point ☐ R509: Vertical Size control 1. Receive the "MONOSCOPE PATTERN (Channel-E5)" signal. 2. Set the Brightness and Contrast controls to MAX position. *Note: Keep the vertical size well-balanced with the horizontal one.*	1. Adjust R509 so that the vertical size correspond to the overscan of the horizontal one. V-SIZE 8% TYP 10% MAX

■ 检波回路的调试

调 试 条 件	调 试 方 法

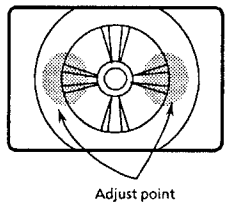
1. 水平对中调试

调试点 ☐R613：水平对中调节 1.接收单象管图案(频道－E5)信号。 注：此项调试应在色彩纯度和画面聚焦度调试之后进行。	1.调节R613，使荧屏图象水平中心位置达至如图所示的 A = B之程度。 

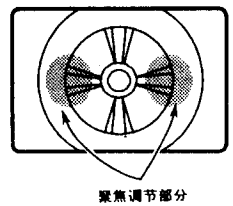
2. 垂直尺寸的调试

调试点 ☐R509：垂直尺寸调节 1.接收单象管图案(频道－E5)信号。 2.设亮度控制和对比度控制于其最大(MAX)位置。 注：调节时应保持垂直尺寸和水平尺寸的平衡。	1.调节R509，以获荧屏图象的最佳垂直尺寸。 垂直尺寸：8％ TYP 10％ MAX

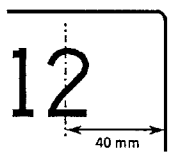
■ FOCUS ADJUSTMENT

Adjusting Conditions	Adjusting Procedures
Adjusting Point ☐ T602: Focus control (a part of T602) 1. Receive "MONOSCOPE PATTERN" signal. 2. Set Contrast control at NORMAL position. 3. Set Brightness control at MAX position (with 0.8 mA of beam current). (Instead of monoscope pattern signal, it is allowed to use white pattern signal of 88% modulation.)	1. Adjust Focus control to have best focus at the central area of CRT. 

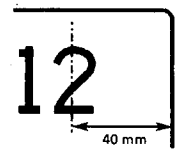
■ 聚焦的调试

调 试 条 件	调 试 方 法
调试点 ☐T602：聚焦控制(T602的一部分) 1.接收单象管图案信号。 2.设对比度控制于标准(NOR)位置。 3.设亮度控制于其最大(MAX)位置(电子束电流为0.8 mA)。 (无单象管图案信号时，可用88%调制的白色图案信号代替之)。	1.调节聚焦控制，使荧屏中心位置达至最佳聚焦效果。 

■ SIGN POSITION ADJUSTMENT

Adjusting Conditions	Adjusting Procedures
Adjusting Point ☐ T1001: Sign Position control 1. Turn the channel call on (on the remote controller).	1. Adjust T1001 so that the center of the first-digit figure of the channel number be about 40 mm from the right edge of the CRT. 

■ 文字信号表示位置的调试

调 试 条 件	调 试 方 法
调试点 ☐T1001：文字信号表示位置调节 1.触按遥控器上频道表示(CALL ON)键。	1.调节T1001，使频道表示数字的个位数位置达至离CRT右边缘40mm左右为宜。 

■ PURITY ADJUSTMENT

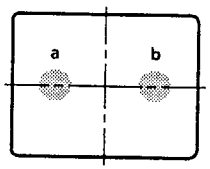
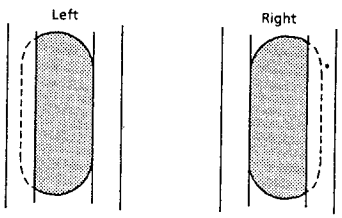
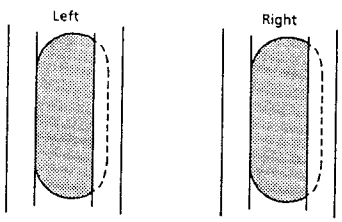


Figure A.



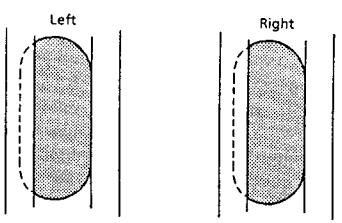
The beam landing is shifted outwards.

Figure B.



The beam landing is shifted to right.

Figure C.



The beam landing is shifted to left.

Figure D.

Adjusting Conditions

1. Prior to the purity adjustment, warm up the unit with beam current of more than 500 μA, for more than 30 minutes.
2. Receive the green signal alone and adjust the beam current to approx. 500 μA.
3. Fully degauss the CRT with the degaussing coil.
4. Before the purity adjustment, it is needed to roughly adjust the static convergence.
5. Set the purity magnet at the position which gives zero (0) magnetic field.

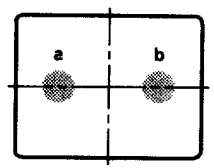
Adjusting Procedures

Adjustment:

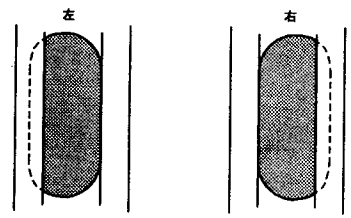
During the adjustment, keep the unit facing the east.

1. Observe the green spots ("a" and "b") with a microscope as shown in ***Fig. A***, and adjust the purity magnet so that they are at the specified landing position.
2. If the right and left green spots are both deviated outwards from their landing positions as shown in ***Fig. B***, push the deflection yoke forwards until their positions are corrected.
3. If the beam landing is shifted to right or left as shown in ***Figs. C*** and ***D***, adjust the opening degree of the purity magnet so that the beam landing is correctly positioned.
4. Adjust the purity magnet so that the beam landing is correct at either of the central part, right and left parts of screen, then check that the green beams at four corners of screen are all correctly positioned.
   Finally, check that the beam landing at any pat of screen is satisfactory with the Rank "B" specifications.
5. If the green beam is positioned to mix with the other colour, pull the deflection yoke backward.
   - Outside of the specified landing:
     To front of the deflection yoke.
   - Inside of the specified landing:
     To back of the deflection yoke.
6. Set the raster rotation at "0" position (with the unit facing the east).
7. Tighten the screws of the deflection coil.
   Tightening torque: 11 kg ± 2 kg.

■ 色彩纯度调试

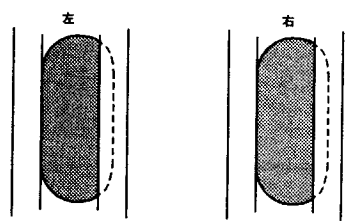


图A.



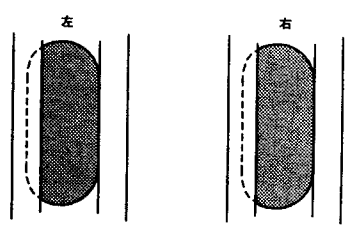
电子束射击点位置向外偏移

图B.



电子束射击点位置向右偏移

图C.



电子束射击点位置向左偏移

图D.

调 试 条 件

1. 作此项调试之前，请用大于500μA的电子束电流预热CRT装置30分钟。
2. 接收绿色单色信号，并调节其电子束电流于500μA左右。
3. 通过消磁线圈对CRT作完全消磁处理。
4. 在作色彩纯度调试时，必须先对静聚焦进行粗调。
5. 调节色彩纯度磁铁，使其磁场磁势为0。

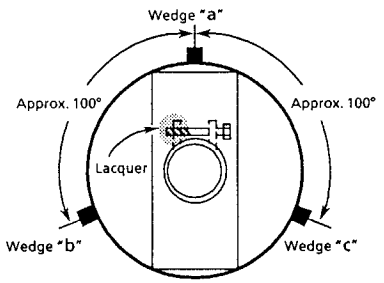
调 试 方 法

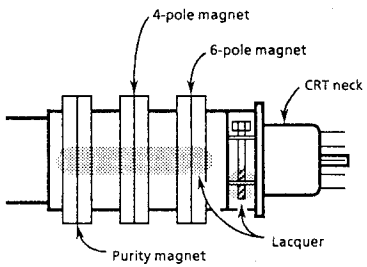
调试：

＊调试中，必须保持CRT面向东方。

1. 用显示镜(放大镜)观察**图A**所示的两绿色色点("a"和"b"),调节色彩纯度磁铁，使两色点位置符合规定要求为止。
2. 如果两色色点位置如**图B**所示各自发生左右偏差，可向前按压偏转线圈将其校正。
3. 如果两色色点位置如**图C**或**图D**所示均发生向右或向左偏移现象，可通过调节色彩纯度磁铁的开启程度，校正电子束射击点位置。
4. 调节色彩纯度磁铁，校正绿色电子束在屏幕中心的射击点位置以及屏幕左右两边的射击点位置。然后，检验在屏幕四角的射击点位置正确与否。最后，按规范B级要求精确检查屏幕上任意点的着色位置是否满足要求。
5. 如果绿色电子束在屏幕的着色点掺杂有其它色彩，可向后轻拉偏转线圈消除其它杂色。
   - 着色点位置向外偏移：
     前推偏转线圈加以调节。
   - 着色点位置向内偏移：
     后拉偏转线圈加以调节。
6. 将光栅偏转角调节至0(CRT座南朝东)。
7. 紧固偏转线圈。
   紧固扭矩：11kg± 2 kg

■ CONVERGENCE ADJUSTMENT





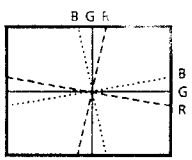


Figure a.

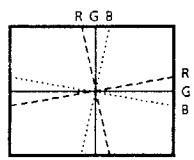


Figure b.

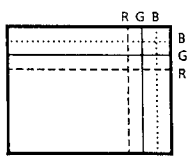


Figure c.

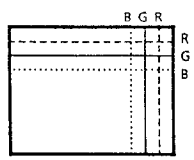


Figure d.

Adjusting Conditions

This adjustment should be performed after the purity magnet adjustment.

1. Receive "CROSSHATCH PATTERN" signal.
2. Set the Brightness control and Contrast control at MAX position.

Adjusting Procedures

STATIC CONVERGENCE

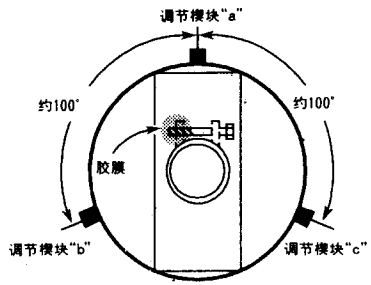
1. Adjust the opening degree of the 4-pole magnet and rotate the magnet to converge red and blue lines.
2. Adjust the opening degree of the 6-pole magnet and rotate the magnet to converge red, blue and green lines.

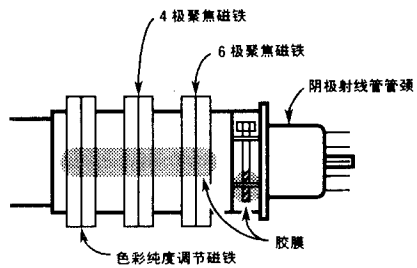
DYNAMIC CONVERGENCE

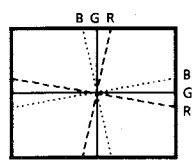
3. Dynamic convergence (convergence of the three colour fields) at the edges of CRT screen is accomplished in the following manner.
   - **Convergence in *Fig. a* :**
     Insert wedge"a" between the deflection yoke and CRT, and tilt the deflection yoke upward until the mis-convergence shown in ***Fig. a*** is corrected.
   - **Convergence in *Fig. b* :**
     Insert wedges "b" and "c" between the deflection yoke and CRT, and tilt the deflection yoke until the mis-convergence shown in ***Fig. b*** is corrected.
   - **Convergence in *Fig. c* :**
     Insert wedge "c" deeply between the deflection yoke and CRT, and tilt the deflection yoke to right until the mis-convergence shown in ***Fig. c*** is corrected.
   - **Convergence in *Fig. d* :**
     Insert wedge "b" deeply between the deflection yoke and CRT, and tilt the deflection yoke to left until the mis-convergence shown in ***Fig. d*** is corrected.
4. Stick the three wedges onto the CRT, and apply glass tapes thereon.
5. Apply lacquer to the deflection yoke screw, magnet unit (made of purity, 4-pole and 6-pole magnets) and magnet unit screw.

After the adjustment, receive either the Red or the Blue signal and check that there is no mixture with the other colour signal.

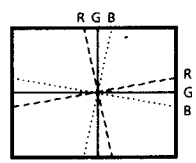
■ 聚焦度的调试



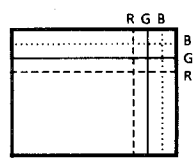




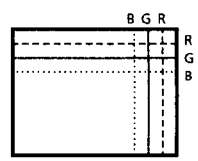
图a.



图b.



图c.



图d.

调 试 条 件

此项调试必须于色彩纯度调试之后进行。

1. 接收"棋盘格测试图"信号。
2. 设亮度调节和对比度调节于最大位置。

调 试 方 法

静聚焦度的调试：

1. 调节 4 极聚焦磁铁的张开程度以及其转角，以会聚红色线条和蓝色线条。
2. 调节 6 极聚焦磁铁的张开程度以及其转角，以会聚红色线条，蓝色线条和绿色线条。

动聚焦度的调试：

3. CRT荧屏边缘的动聚焦度(三彩色色场的会聚)的调试按下述要求进行。

   ●按图a. 要求的会聚调试：
   插入调节楔块"a"于偏转线圈和CRT之间，并向上倾斜调节偏转线圈，以按图a.所示要求矫正不良会聚。

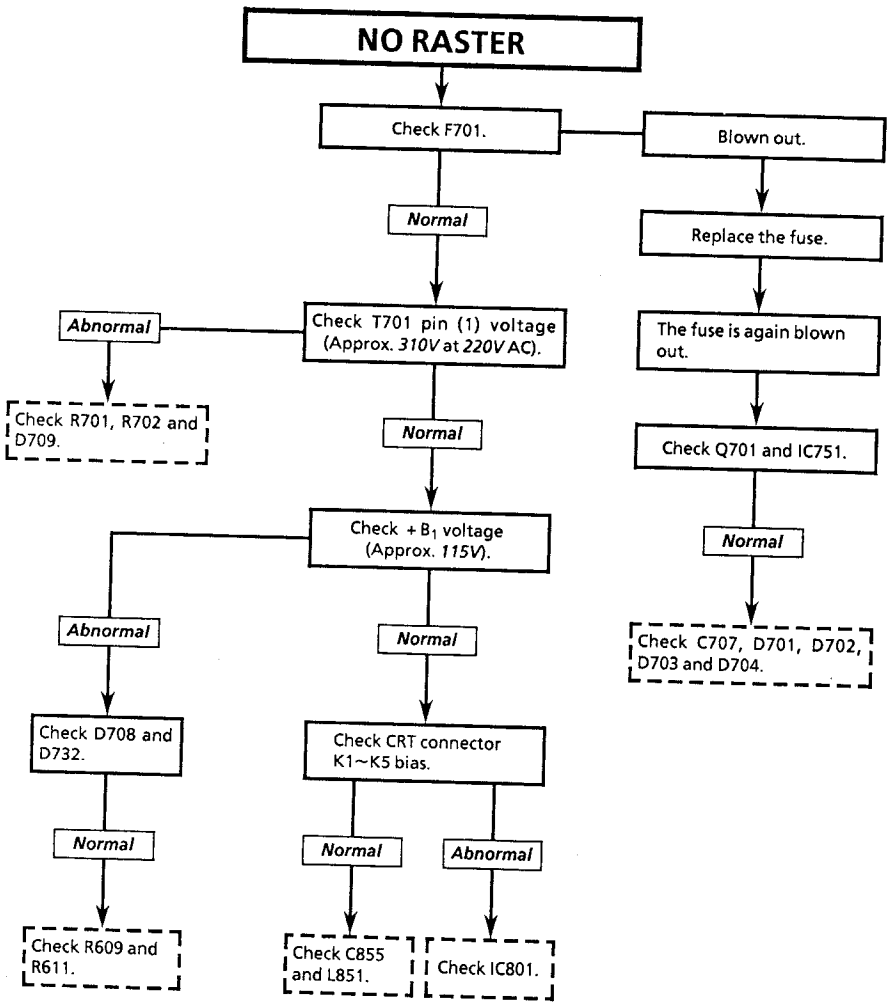
   ●按图b. 要求的会聚调试：
   插入调节楔块"b"和"c"于偏转线圈和CRT之间，并倾斜调节偏转线圈，以按图b.所示要求矫正不良会聚。

   ●按图c. 要求的会聚调试：
   深插调节楔块"c"于偏转线圈和CRT之间，并向右倾斜调节偏转线圈，以按图c.所示要求矫正不良会聚。

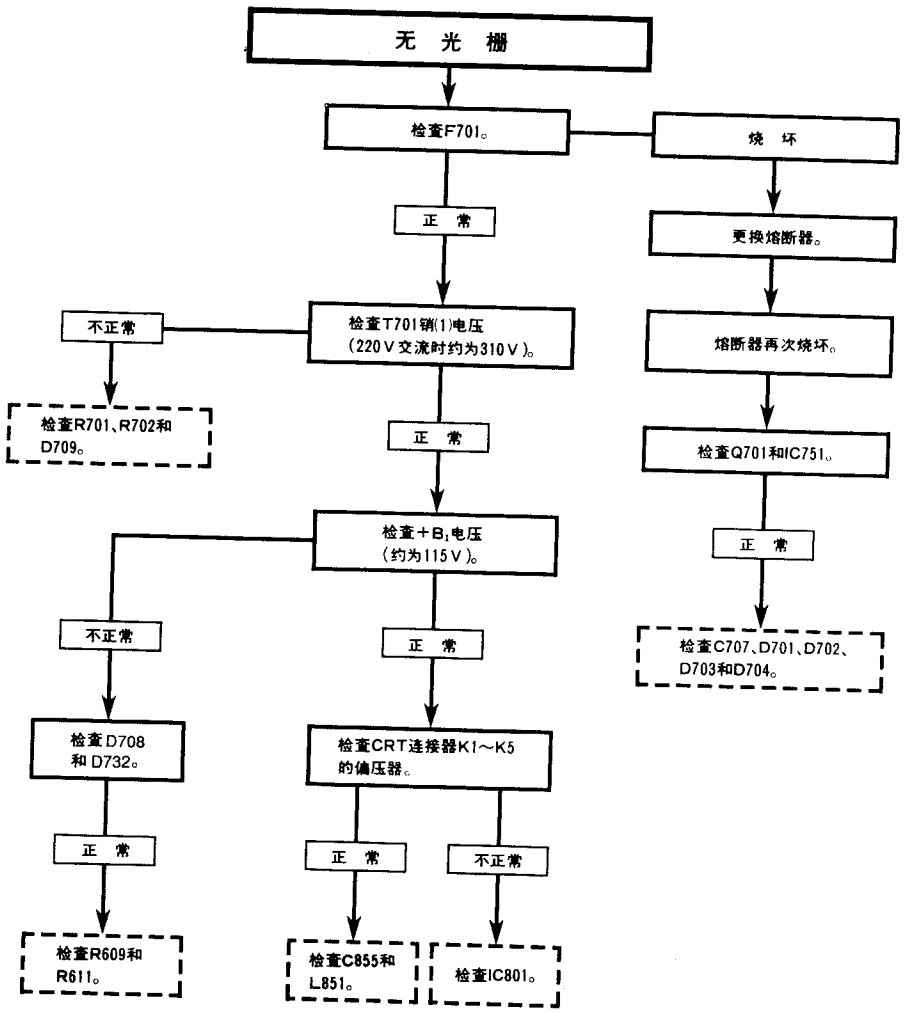
   ●按图d. 要求的会聚调试：
   深插调节楔块"b"于偏转线圈和CRT之间，并向左倾斜调节偏转线圈，以按图d.所示要求矫正不良会聚。
4. 完成以上调试后，用透明胶带粘固三只调节楔块于CRT。
5. 然后用胶膜封固偏转线圈调节螺丝，调节磁铁装置(由纯度调节磁铁、4 极聚焦磁铁和 6 极聚焦磁铁构成)以及调节磁铁装置固定螺丝。

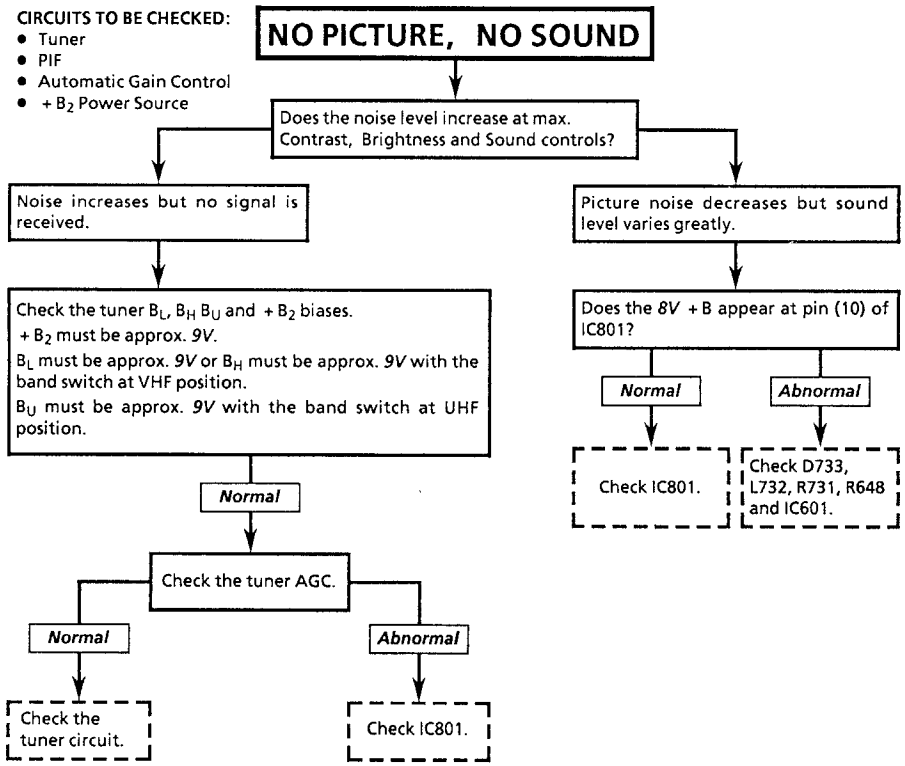
该项调试完成后，让电视机接收红色或蓝色信号，并检查接收的单色信号是否掺杂有其他色彩信号。

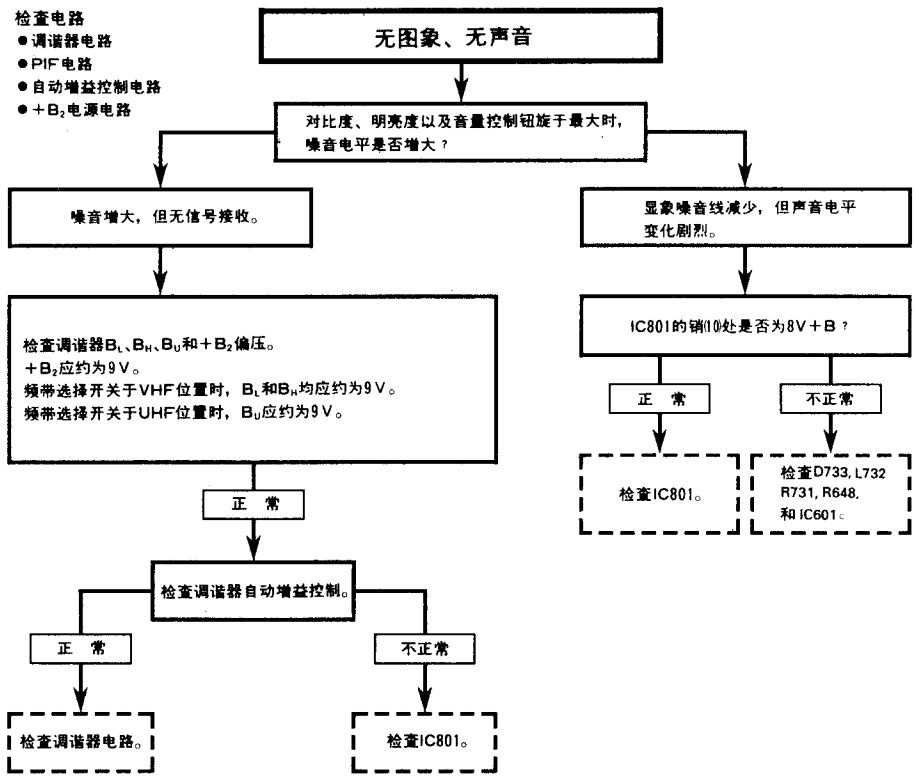
TROUBLE SHOOTING TABLE

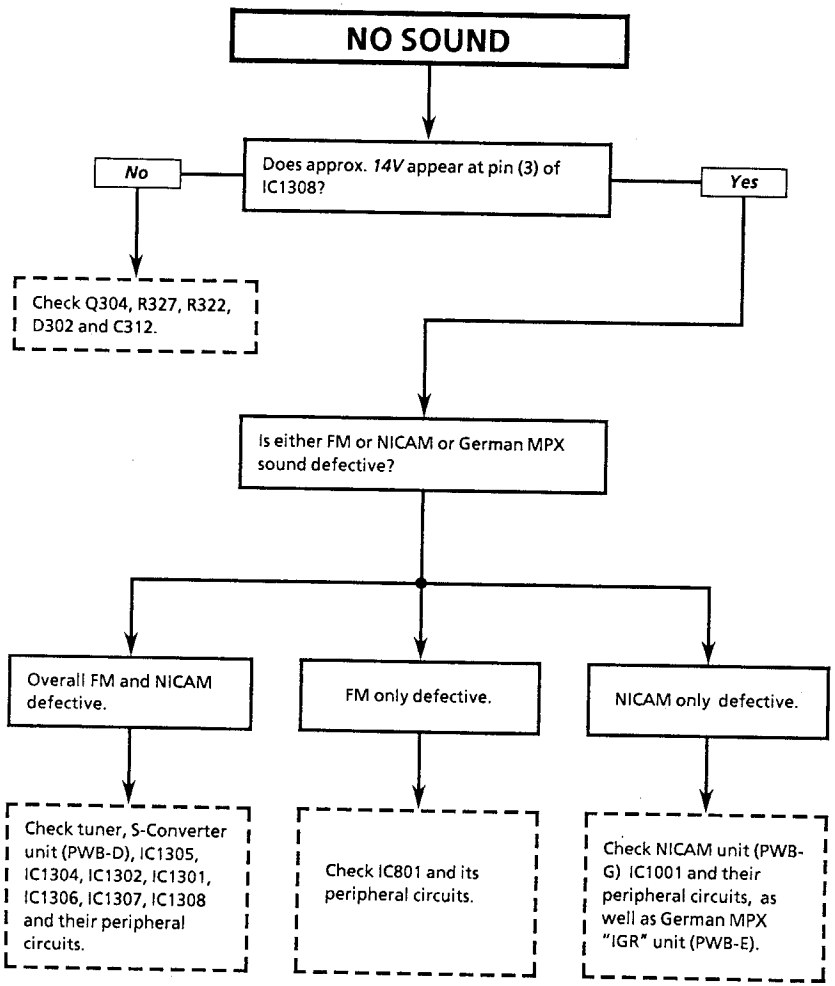


故障检出流程表

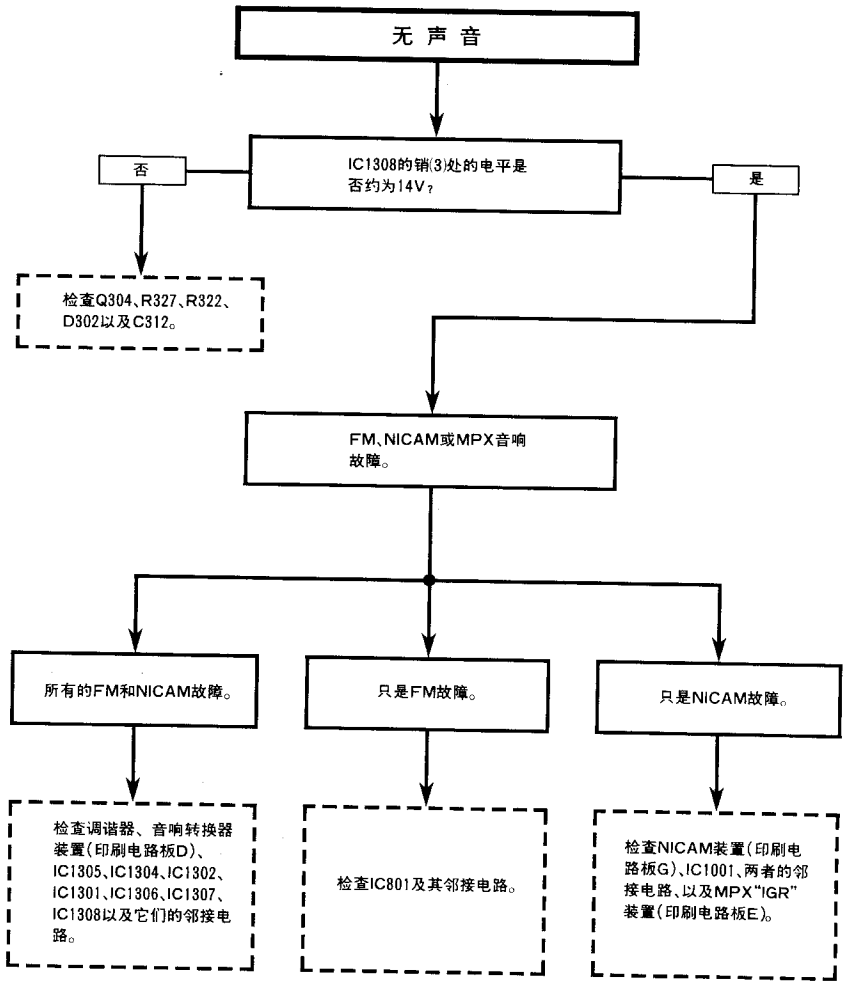



CIRCUITS TO BE CHECKED:
• Tuner
• PIF
• Automatic Gain Control
• +B2 Power Source
NO PICTURE, NO SOUND
Does the noise level increase at max. Contrast, Brightness and Sound controls?
Noise increases but no signal is received.
Picture noise decreases but sound level varies greatly.
Check the tuner BL, BH BU and +B2 biases.
+B2 must be approx. 9V.
BL must be approx. 9V or BH must be approx. 9V with the band switch at VHF position.
BU must be approx. 9V with the band switch at UHF position.
Does the 8V +B appear at pin (10) of IC801?
Normal
Abnormal
Check IC801.
Check D733, L732, R731, R648 and IC601.
Normal
Check the tuner AGC.
Normal
Abnormal
Check the tuner circuit.
Check IC801.


检查电路
●调谐器电路
●PIF电路
●自动增益控制电路
●+B2电源电路
无图象、无声音
对比度、明亮度以及音量控制钮旋于最大时，噪音电平是否增大？
噪音增大，但无信号接收。
显象噪音线减少，但声音电平变化剧烈。
检查调谐器BL、BH、BU和+B2偏压。
+B2应约为9V。
频带选择开关于VHF位置时，BL和BH均应约为9V。
频带选择开关于UHF位置时，BU应约为9V。
IC801的销(10)处是否为8V+B？
正 常
不正常
检查IC801。
检查D733, L732 R731, R648, 和IC601。
正 常
检查调谐器自动增益控制。
正 常
不正常
检查调谐器电路。
检查IC801。


NO SOUND
Does approx. 14V appear at pin (3) of IC1308?
No
Yes
Check Q304, R327, R322, D302 and C312.
Is either FM or NICAM or German MPX sound defective?
Overall FM and NICAM defective.
FM only defective.
NICAM only defective.
Check tuner, S-Converter unit (PWB-D), IC1305, IC1304, IC1302, IC1301, IC1306, IC1307, IC1308 and their peripheral circuits.
Check IC801 and its peripheral circuits.
Check NICAM unit (PWB-G) IC1001 and their peripheral circuits, as well as German MPX "IGR" unit (PWB-E).

E16


无 声 音
IC1308的销(3)处的电平是否约为14V？
否
是
检查Q304、R327、R322、D302以及C312。
FM、NICAM或MPX音响故障。
所有的FM和NICAM故障。
只是FM故障。
只是NICAM故障。
检查调谐器、音响转换器装置(印刷电路板D)、IC1305、IC1304、IC1302、IC1301、IC1306、IC1307、IC1308以及它们的邻接电路。
检查IC801及其邻接电路。
检查NICAM装置(印刷电路板G)、IC1001、两者的邻接电路、以及MPX"IGR"装置(印刷电路板E)。

C16

NEITHER VERTICAL NOR HORIZONTAL SYNCHRONIZATION

CIRCUIT TO BE CHECKED:
- Sync. Separator Circuit.

Check IC801.

DEFECTIVE VERTICAL AMP. AND VERTICAL LINEARITY

Readjust vertical size.

- Vertical size is abnormal. → Check R510, R511, C514 and R509.
- Vertical linearity is abnormal. → Check C508, R519, R508 and R505.

NO VERTICAL SCAN

Check IC501 bias.

- *Normal* → Check C506.
- *Abnormal* → Check IC501.

E17

无垂直同步信号和水平同步信号

检查电路：
- 同步分离电路

检查IC801。

垂直放大及垂直线性度异常

重调垂直尺寸。

- 垂直尺寸不符要求。 → 检查R510、R511、C514和R509。
- 垂直线性度不符要求。 → 检查C508、R519、R508和R505。

无垂直扫描

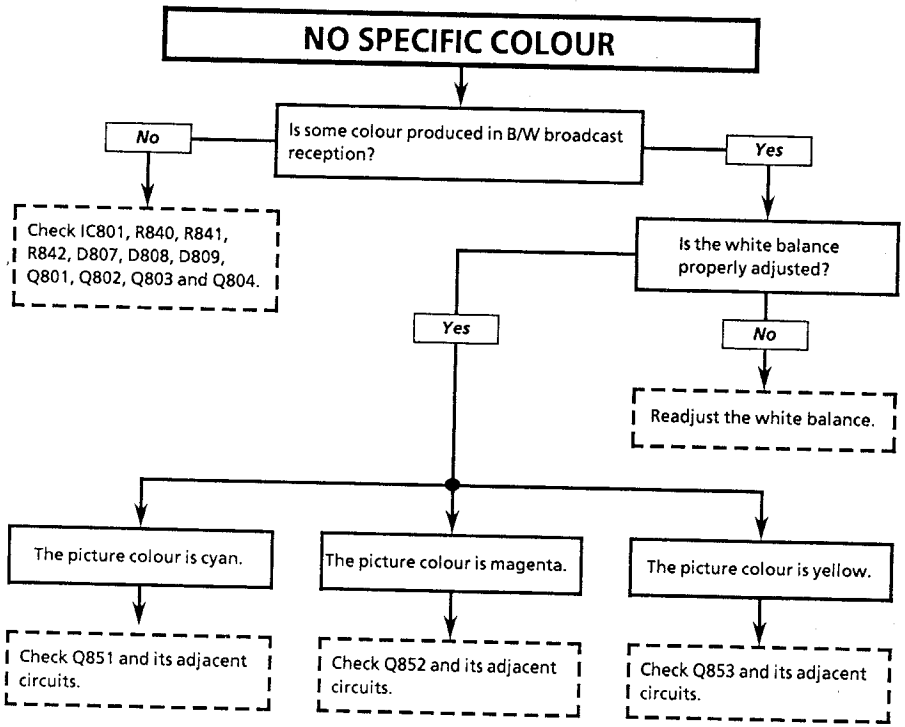
检查IC501偏压器。

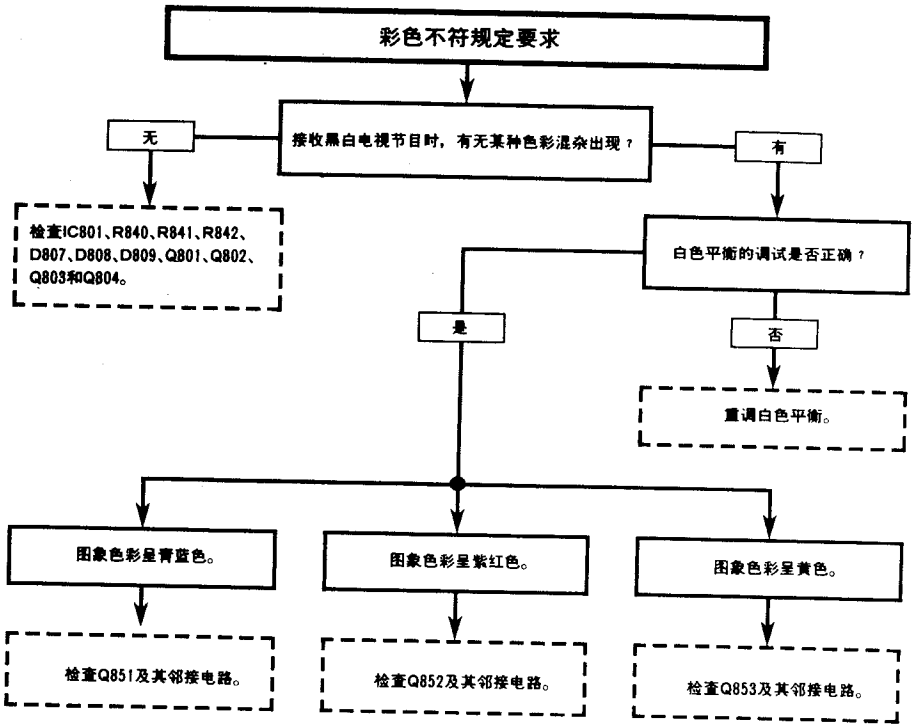
- 正 常 → 检查C506。
- 不正常 → 检查IC501。

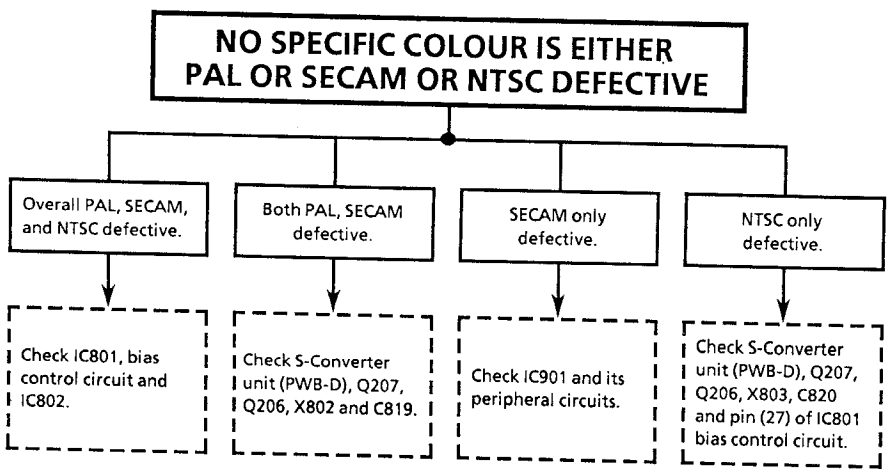
C17

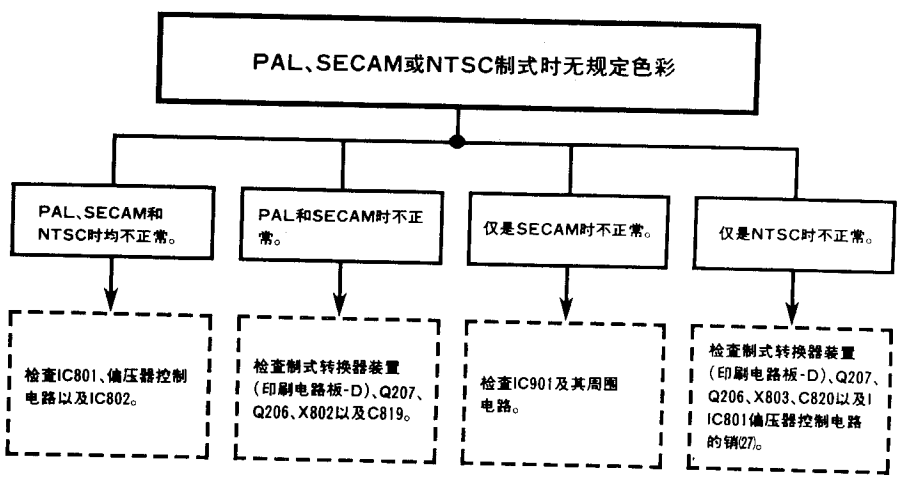
17

14BN4

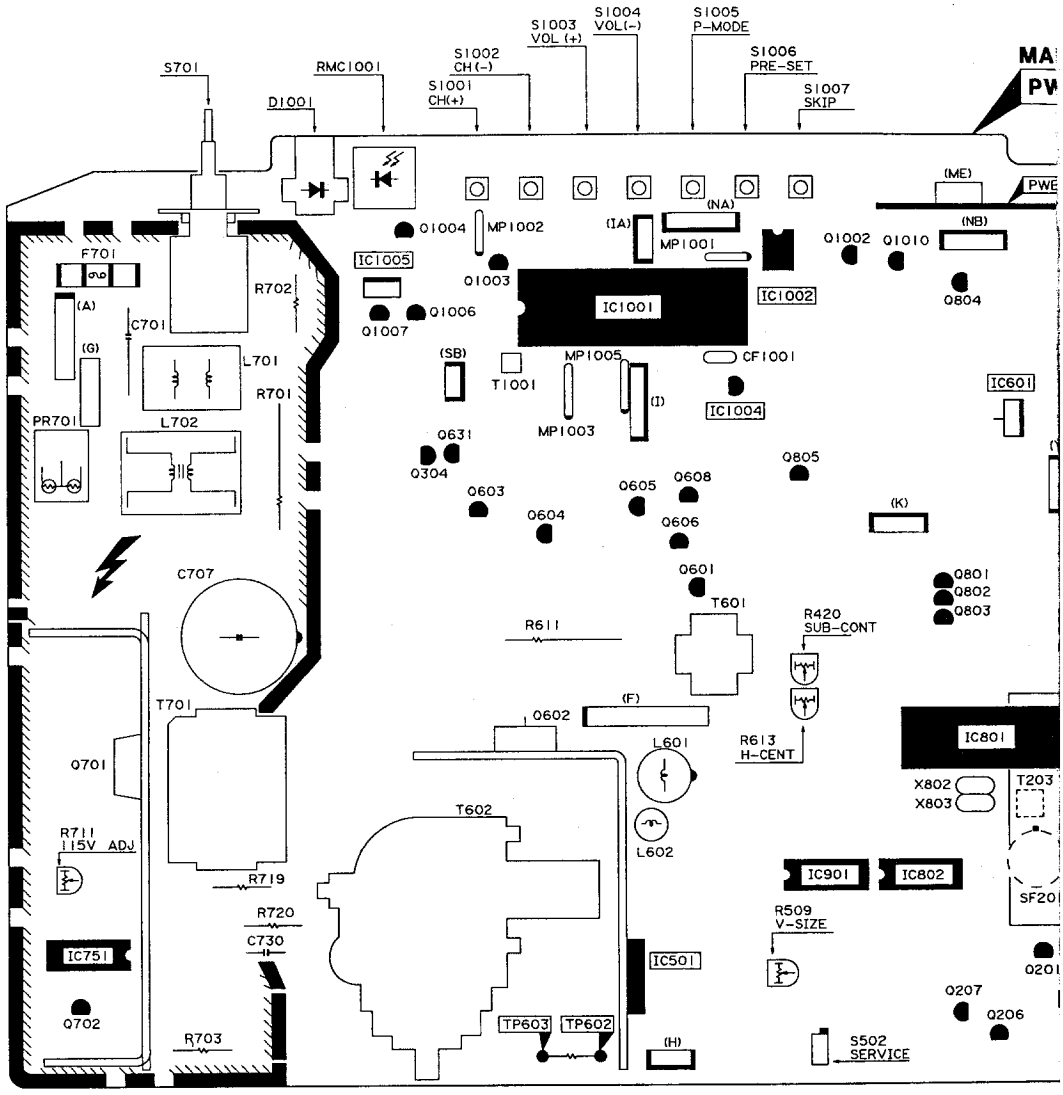

NO SPECIFIC COLOUR
No
Is some colour produced in B/W broadcast reception?
Yes
Check IC801, R840, R841, R842, D807, D808, D809, Q801, Q802, Q803 and Q804.
Is the white balance properly adjusted?
Yes
No
Readjust the white balance.
The picture colour is cyan.
The picture colour is magenta.
The picture colour is yellow.
Check Q851 and its adjacent circuits.
Check Q852 and its adjacent circuits.
Check Q853 and its adjacent circuits.

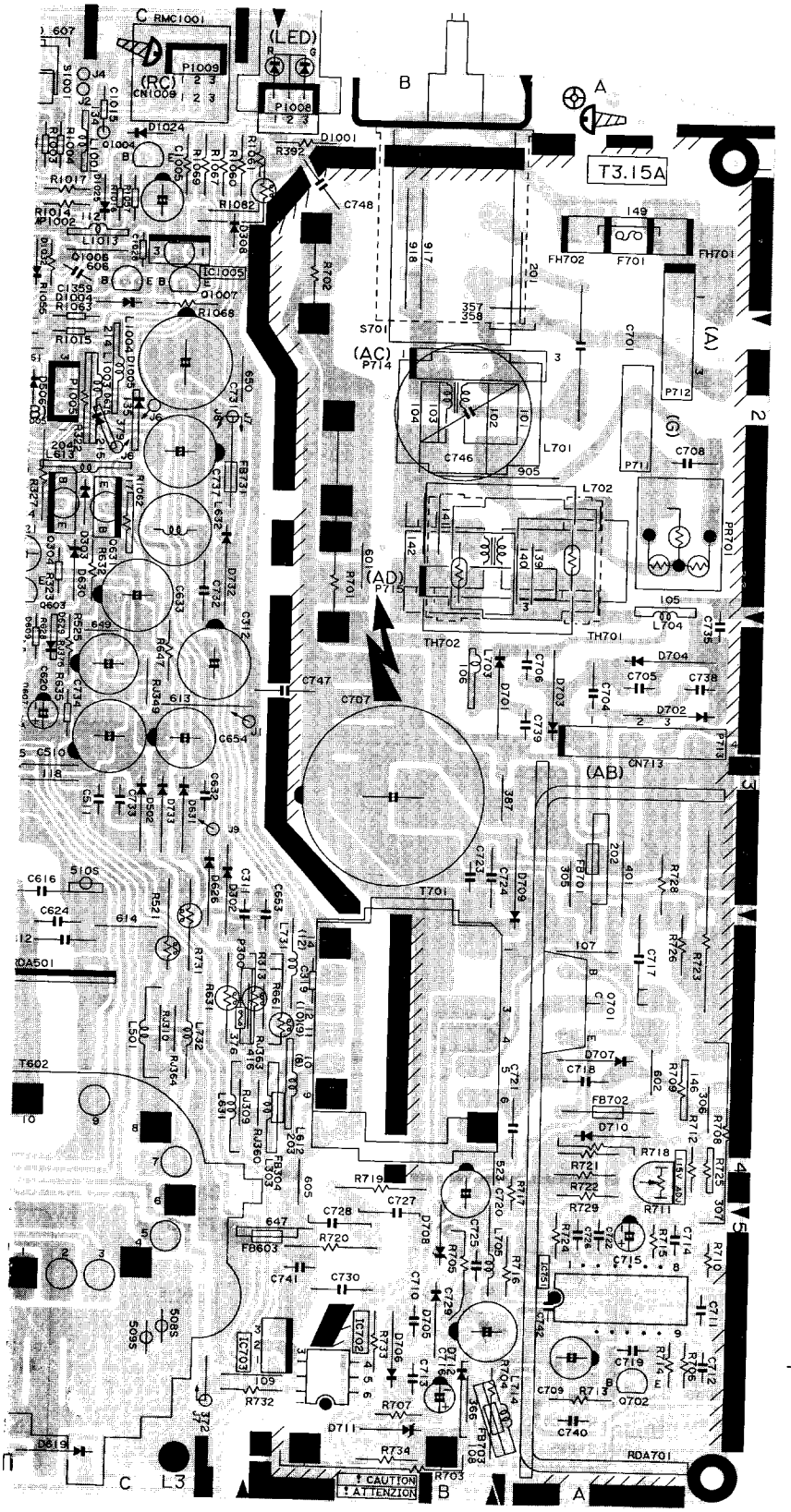

彩色不符规定要求
无
接收黑白电视节目时，有无某种色彩混杂出现？
有
检查IC801、R840、R841、R842、D807、D808、D809、Q801、Q802、Q803和Q804。
白色平衡的调试是否正确？
是
否
重调白色平衡。
图象色彩呈青蓝色。
图象色彩呈紫红色。
图象色彩呈黄色。
检查Q851及其邻接电路。
检查Q852及其邻接电路。
检查Q853及其邻接电路。


NO SPECIFIC COLOUR IS EITHER PAL OR SECAM OR NTSC DEFECTIVE
Overall PAL, SECAM, and NTSC defective.
Both PAL, SECAM defective.
SECAM only defective.
NTSC only defective.
Check IC801, bias control circuit and IC802.
Check S-Converter unit (PWB-D), Q207, Q206, X802 and C819.
Check IC901 and its peripheral circuits.
Check S-Converter unit (PWB-D), Q207, Q206, X803, C820 and pin (27) of IC801 bias control circuit.

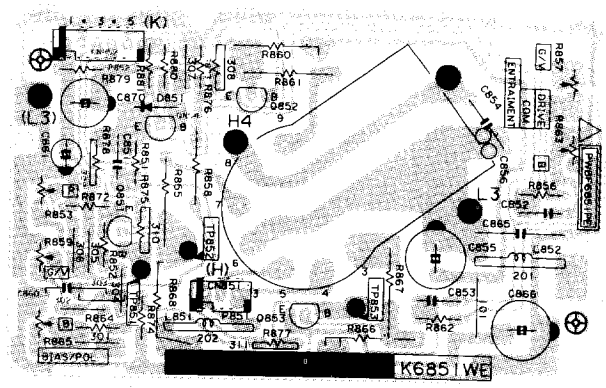

PAL、SECAM或NTSC制式时无规定色彩
PAL、SECAM和NTSC时均不正常。
PAL和SECAM时不正常。
仅是SECAM时不正常。
仅是NTSC时不正常。
检查IC801、偏压器控制电路以及IC802。
检查制式转换器装置（印刷电路板-D）、Q207、Q206、X802以及C819。
检查IC901及其周围电路。
检查制式转换器装置（印刷电路板-D）、Q207、Q206、X803、C820以及IC801偏压器控制电路的销(27)。

CHASSIS LAYOUT 机芯底盘电路图



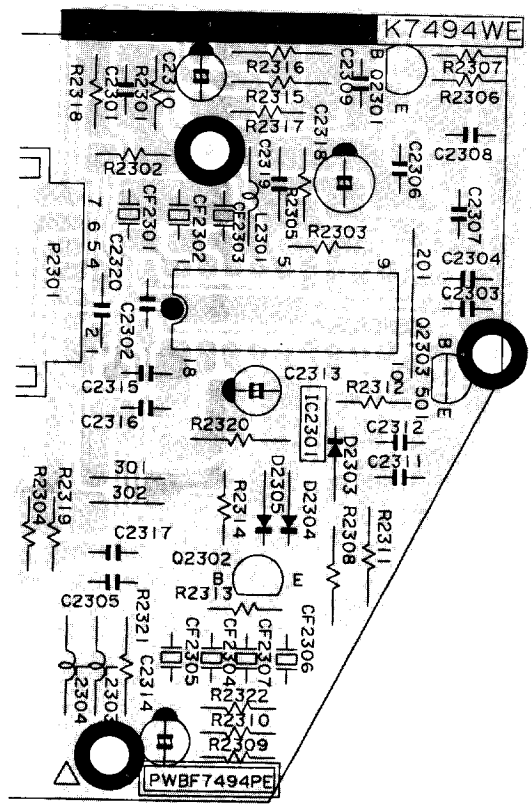


母体装置板



PWB-B: CRT Socket Unit

阴极射线管插座装置板



PWB-D: SIF Converter Unit

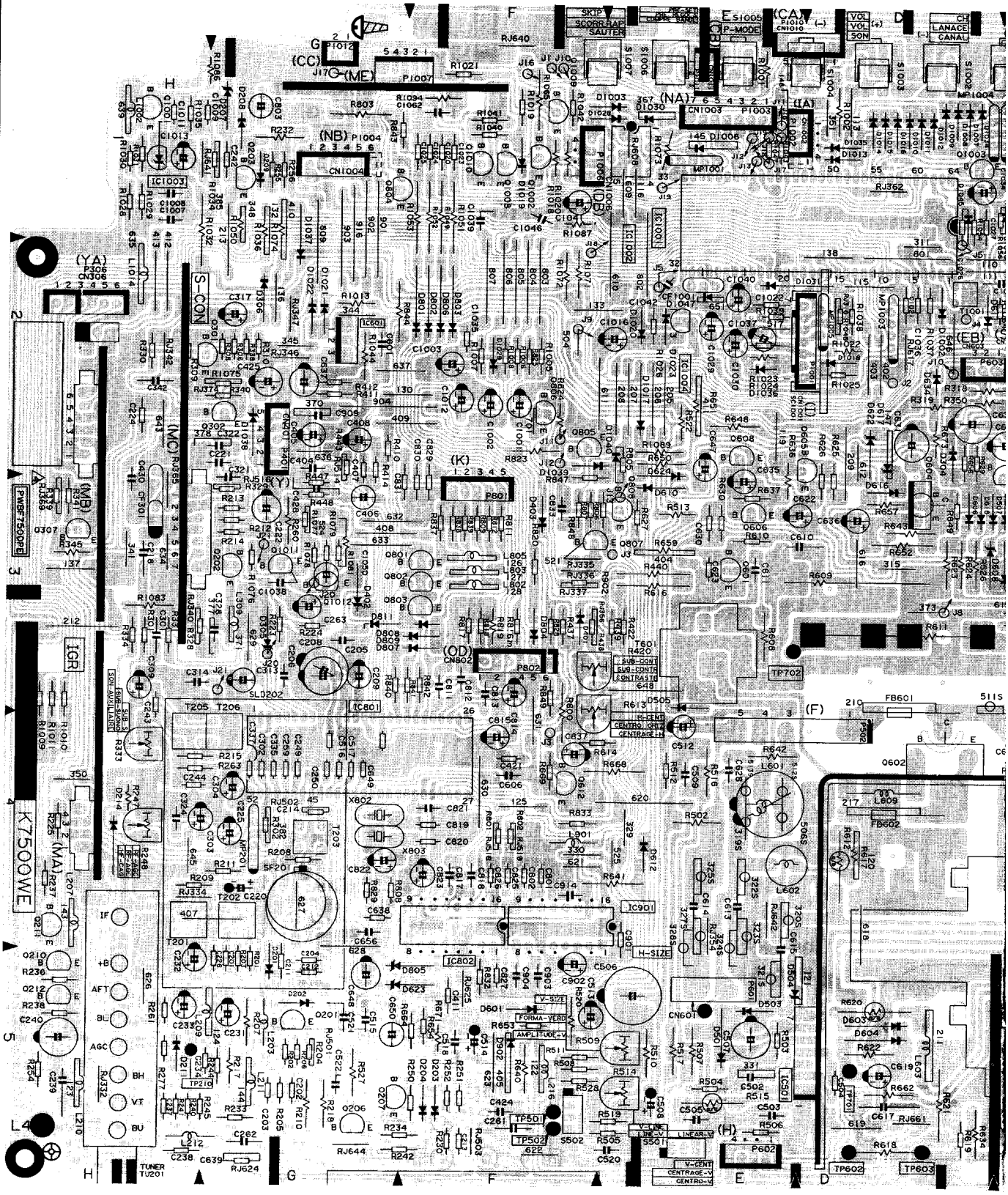
中音频转换器印刷电路板

PRINTED WIRING BOARD ASSEMBLIES

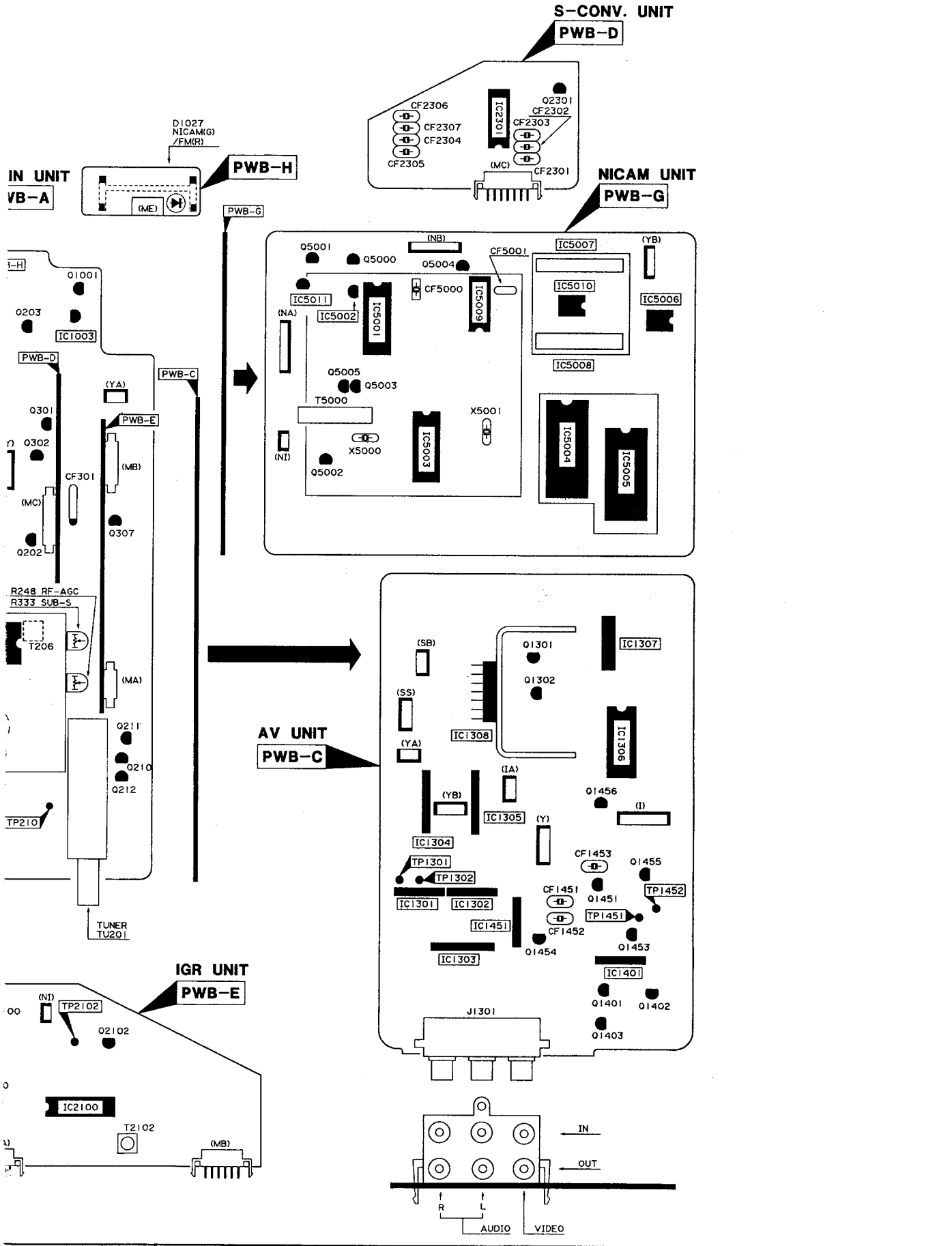
(All the PWBs here are shown as viewed from their wiring sides)

印刷电路板的组装件

（这里的所有印刷电路都是从导线接头端的角度显示出来。）

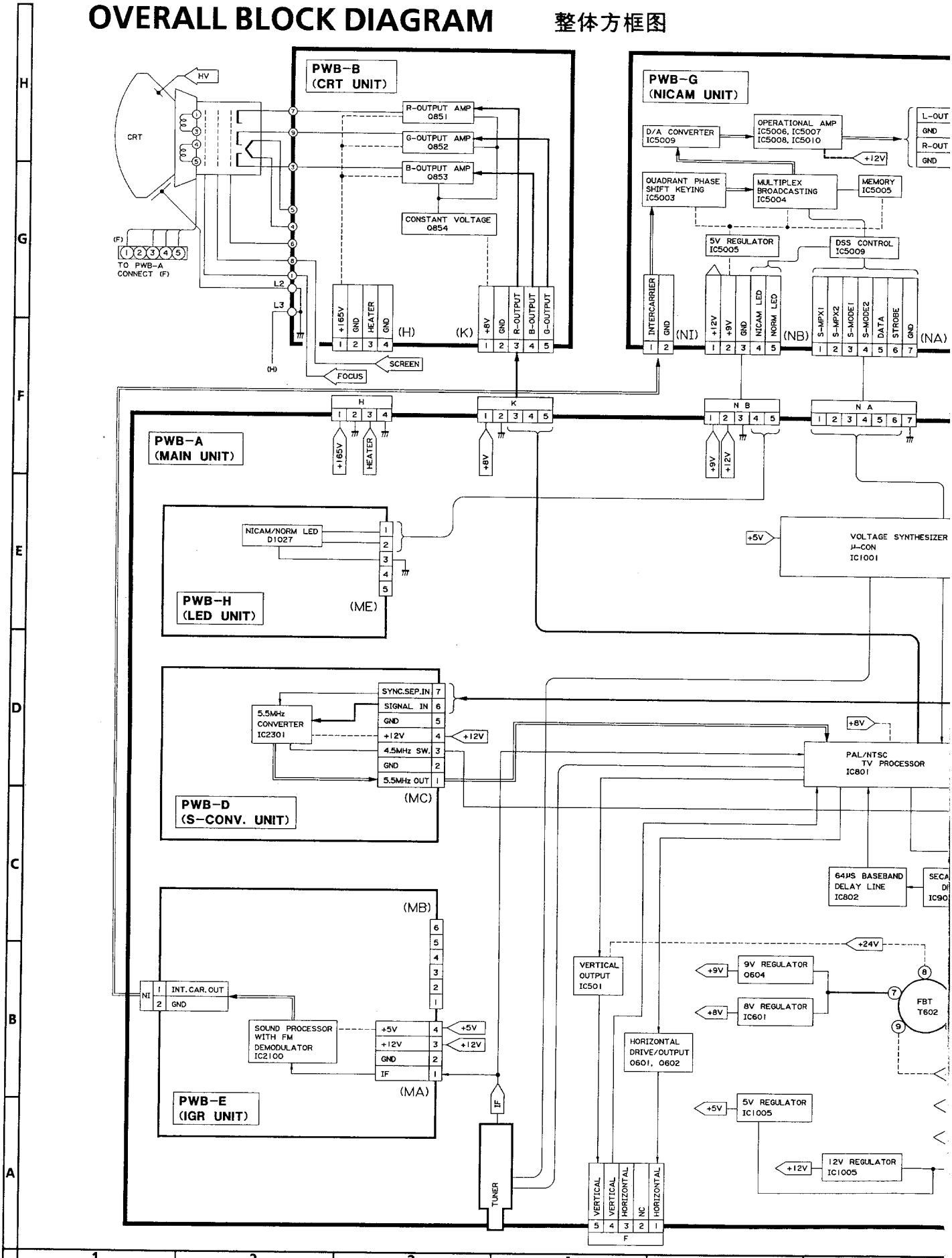


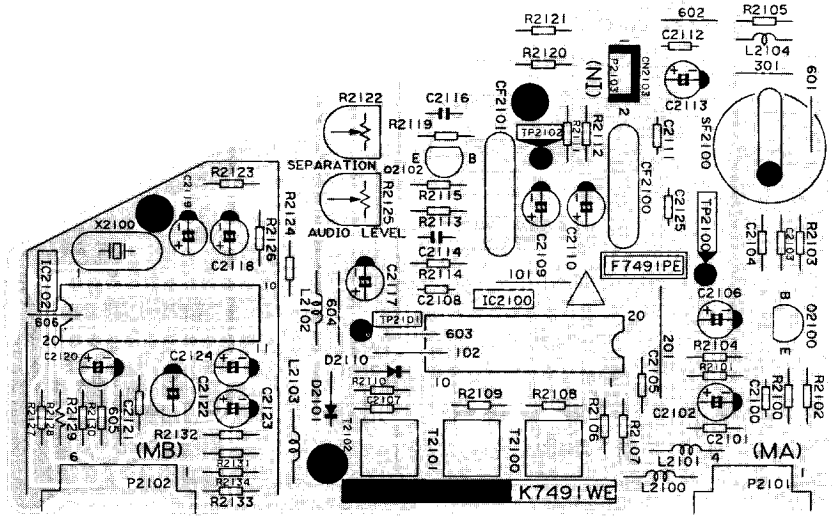
PWB-A: Mother Unit


S-CONV. UNIT
PWB-D
CF2306
CF2307
CF2304
CF2305
IC2301
Q2301
CF2302
CF2303
(MC)
CF2301
D1027
NICAM(G)
/FM(R)
PWB-H
(ME)
IN UNIT
VB-A
NICAM UNIT
PWB-G
PWB-G
(NB)
Q5001
Q5000
Q5004
CF5001
IC5007
(YB)
IC5011
IC5002
IC5001
CF5000
IC5009
IC5010
IC5006
(NA)
IC5008
Q5005
Q5003
T5000
X5001
(NI)
X5000
Q5002
IC5003
IC5004
IC5005
Q1001
Q203
IC1003
PWB-D
PWB-C
(YA)
PWB-E
Q301
Q302
(MB)
CF301
(MC)
Q307
Q202
R248 RF-AGC
R333 SUB-S
T206
(MA)
Q211
Q210
Q212
TP210
TUNER
TU201
AV UNIT
PWB-C
(SB)
Q1301
IC1307
Q1302
(SS)
IC1308
IC1306
(YA)
(IA)
Q1456
(YB)
IC1305
(I)
(Y)
IC1304
CF1453
Q1455
TP1301
TP1302
TP1452
CF1451
Q1451
IC1301
IC1302
TP1451
IC1451
CF1452
Q1453
Q1454
IC1303
IC1401
Q1401
Q1402
J1301
Q1403
IGR UNIT
PWB-E
(NI)
TP2102
Q2102
IC2100
T2102
(MB)
IN
OUT
R
L
AUDIO
VIDEO

7	8	9	10	11	12

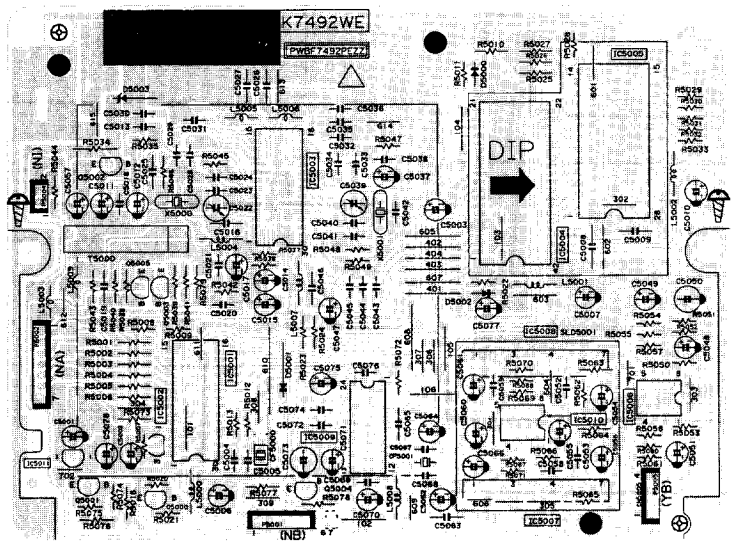
OVERALL BLOCK DIAGRAM 整体方框图





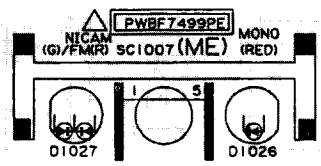
PWB-E: IGRUnit

IGR装置印刷电路板



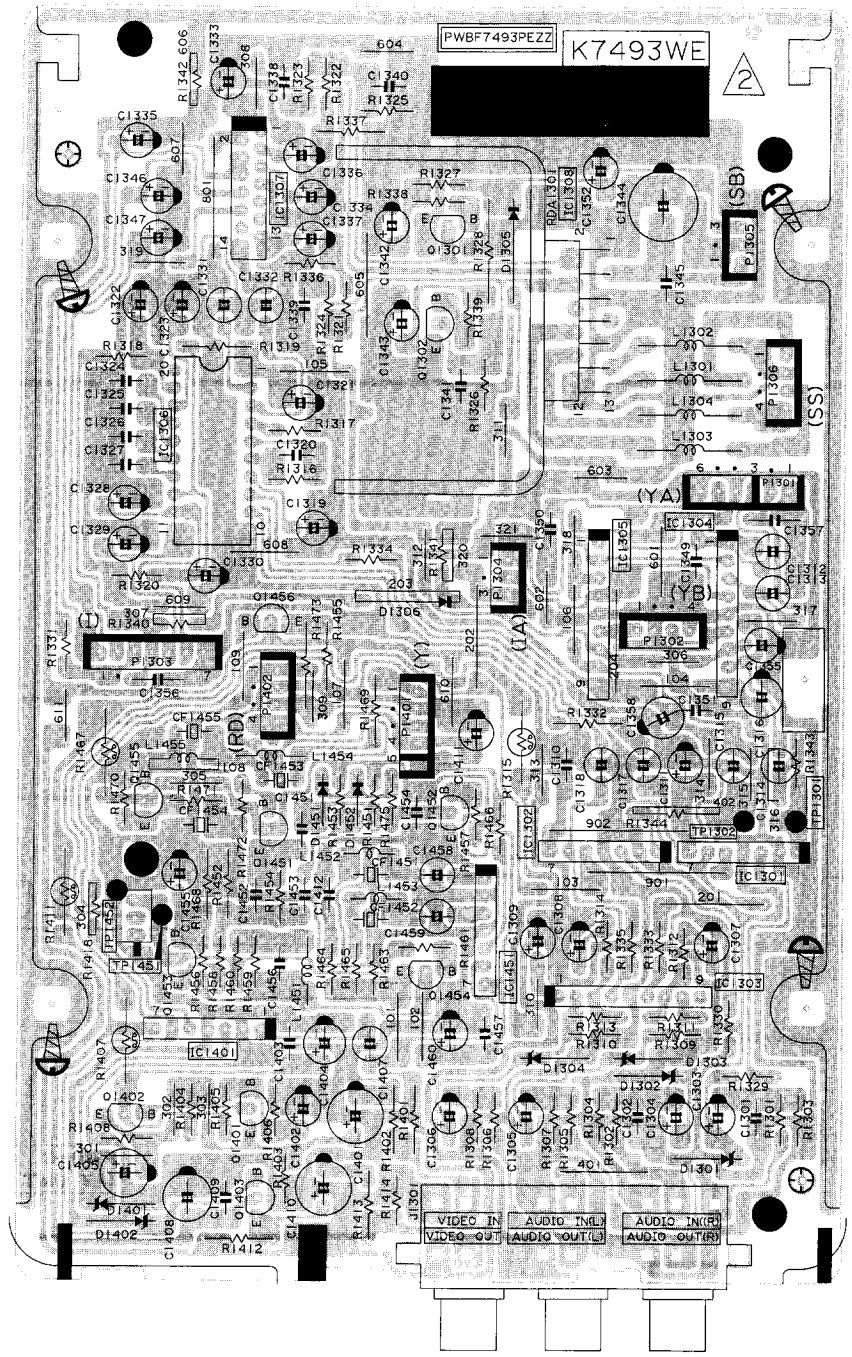
PWB-G: NICAM Unit

NICAM装置印刷电路板

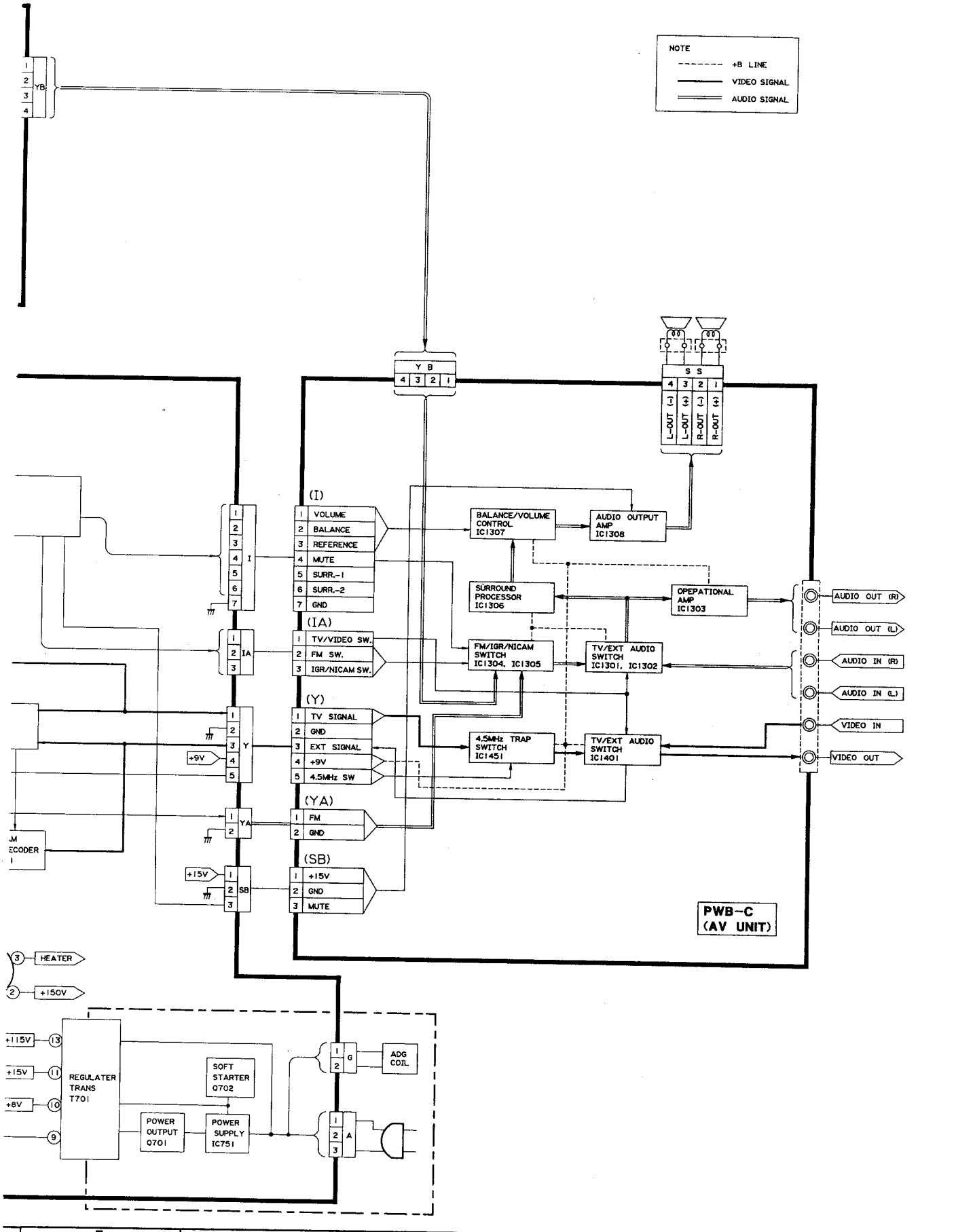


PWB-H: LED Unit

发光二极管印刷电路板



PWB-C: AV Unit
音频/视频装置板


NOTE
+B LINE
VIDEO SIGNAL
AUDIO SIGNAL
YB
Y B
S S
L-OUT
L-OUT
R-OUT
R-OUT
(I)
VOLUME
BALANCE
REFERENCE
MUTE
SURR.-1
SURR.-2
GND
(IA)
TV/VIDEO SW.
FM SW.
IGR/NICAM SW.
(Y)
TV SIGNAL
GND
EXT SIGNAL
+9V
4.5MHz SW
(YA)
FM
GND
(SB)
+15V
GND
MUTE
BALANCE/VOLUME CONTROL IC1307
AUDIO OUTPUT AMP IC1308
SURROUND PROCESSOR IC1306
OPEPATIONAL AMP IC1303
FM/IGR/NICAM SWITCH IC1304, IC1305
TV/EXT AUDIO SWITCH IC1301, IC1302
4.5MHz TRAP SWITCH IC1451
TV/EXT AUDIO SWITCH IC1401
AUDIO OUT (R)
AUDIO OUT (L)
AUDIO IN (R)
AUDIO IN (L)
VIDEO IN
VIDEO OUT
PWB-C
(AV UNIT)
HEATER
+150V
+115V
+15V
+8V
REGULATER TRANS T701
SOFT STARTER Q702
POWER OUTPUT Q701
POWER SUPPLY IC751
ADG COIL

DESCRIPTION OF SCHEMATIC DIAGRAM

CAUTION: This circuit diagram is original one, therefore there may be a slight difference from yours.

SAFETY NOTE:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" (▒▒▒▒▒▒▒▒) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFOMANCE OF THE SET.

SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (▬▬ ▪ ▬▬) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.
WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

NOTES:

1. The unit of resistance "ohm" is omitted. (K = 1000 ohms, M = Meg ohm).
2. All resistors are 1/8 watt, unless otherwise noted.
3. All capacitors are μF, unless otherwise noted. (P = μμF).
4. The diodes, whose parts code is not described, are the 1SS119.

VOLTAGE MEASUREMENT CONDITIONS:

1. The voltage without parenthesis represents the value measured with PAL colour signal.
2. The voltage in parenthesis represents the value measured with no signal.
3. All the voltages were measured by using a high impedance voltmeter.

WAVEFORM MEASUREMENT CONDITIONS:

1. The colour bar signal applied to the TP401 is 2.0 Vp-p.
2. The tuner AGC voltage is approximately 4V.

电路原理图的说明

注意：这里的电路原理图均为最初设计原图，与您的机器的电路原理图可能有不同之处。

安全使用注意事项：

1. 在进行部件更换之前，务请拔出电源插头。
2. 本装置工作时，机芯底盘的半导体散热片有触电之虑，务请注意。

安全使用注意要点：

标有"⚠"(▒▒▒▒▒▒▒▒)的部件对于电视机安全的维护有至关重要的意义。为了维护本机的安全和使本机能正常工作，必须使用指定品来更换这些部件。

维修注意：

被(▬▬ ▪ ▬▬)线围起的地方直接和交流电源电压相连接。当对该处进行维修时，为了排除遭受电击的危险性，要在电视接收机和交流电源之间连接隔离变压器。

电路单位说明：

1. 电阻欧姆(Ω)单位予以略记(K = 千欧姆，M = 兆欧姆)。
2. 除特别说明者外，图中电阻功率均为1/8瓦特。
3. 除特别说明者(P = 微微法拉)外，图中电容单位均为μF(微法拉)。
4. 除特别说明者外，所有的二极管均为1SS119。

电压测定条件：

1. 无括弧的电压值是由PAL制式彩条信号测定的。
2. 在括弧内的电压值是由无信号测定的。
3. 所有各点的电压值均是用高阻抗电压来测定的。

波形测定条件：

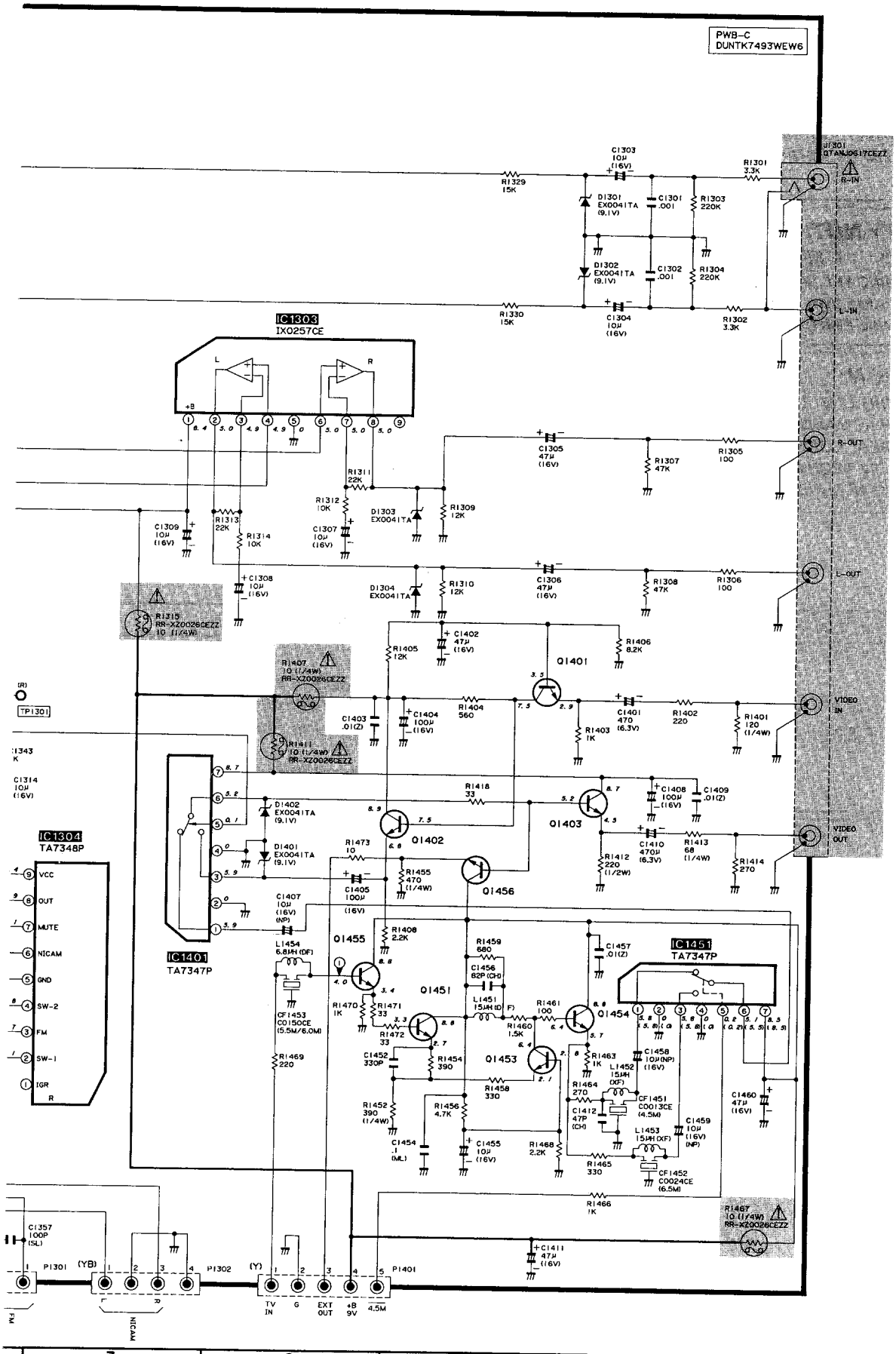
1. 施加于TP201的彩条信号应为2.0V峰间值。
2. 调谐器AGC(自动增益控制)电压约为4V。

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

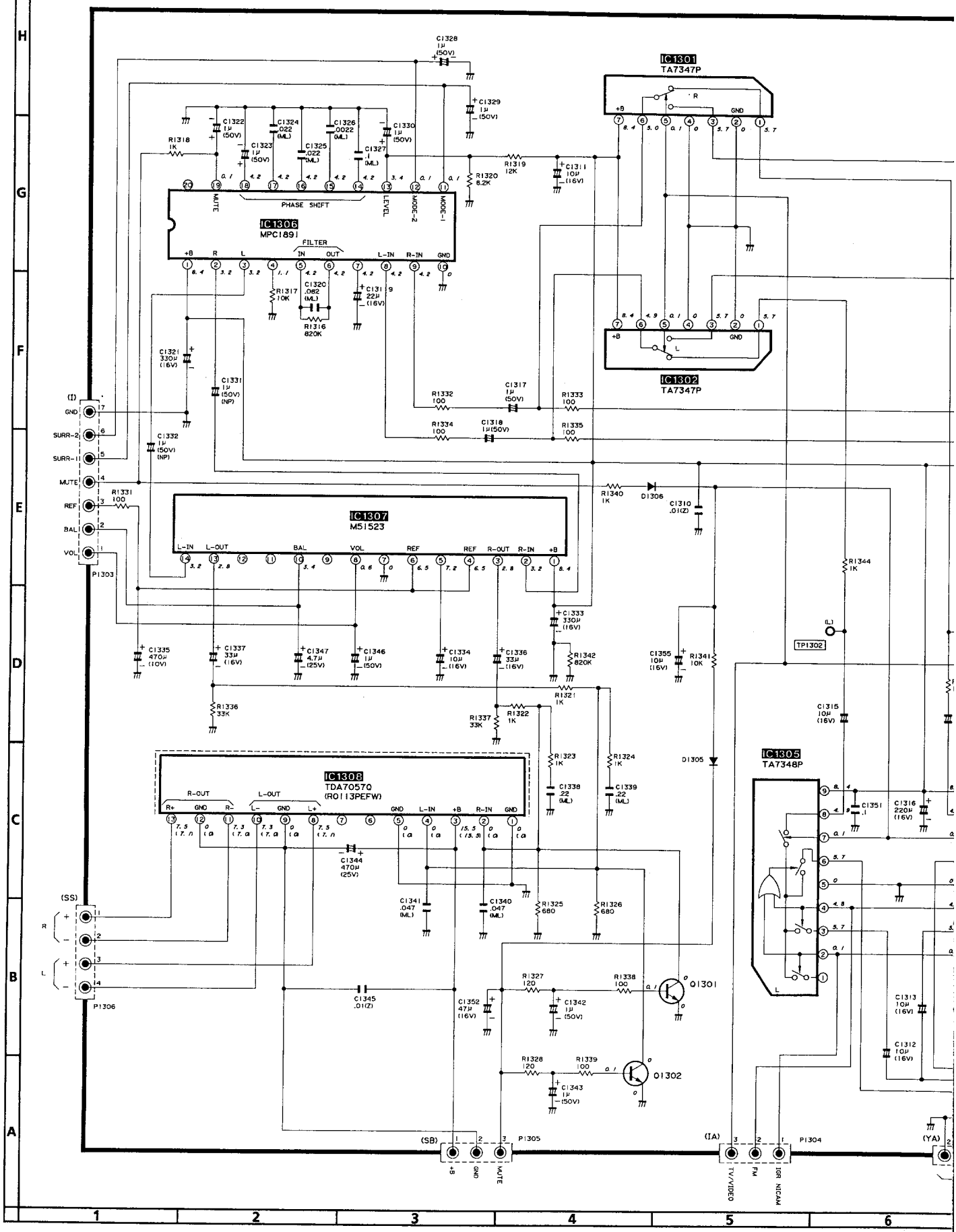
NOTE:
ALL TRANSISTORS ARE 2SC945 OR 2SC1815(GW) AND ALL DIODES ARE 1SS119, UNLESS OTHERWISE NOTED.

注意：
这里的电路原理图均为最初设计原图，与您的机器电路原理图可能有不同之处。

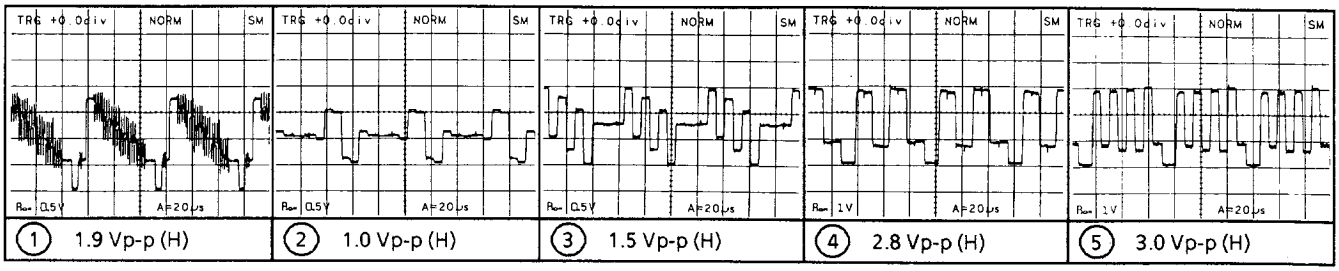
注意：
除特别说明者外，所有的晶体管均为2SC1815(GW)或2SC945，另外，所有的二极管也均为1SS119。



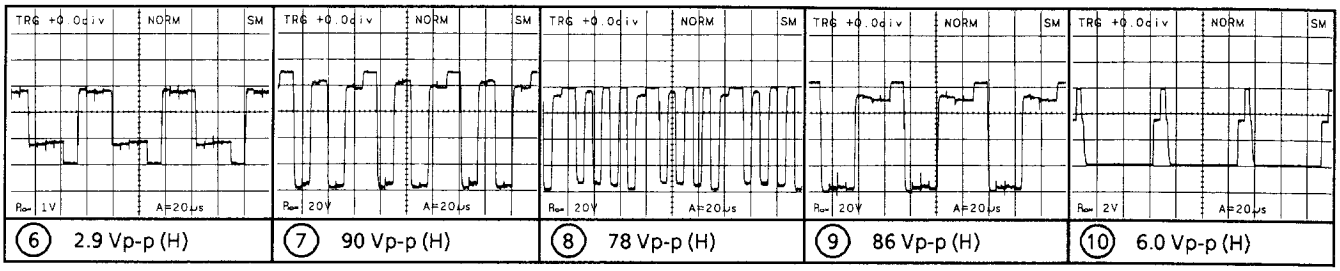
SCHEMATIC DIAGRAM: AV Unit 原理图：声象装置



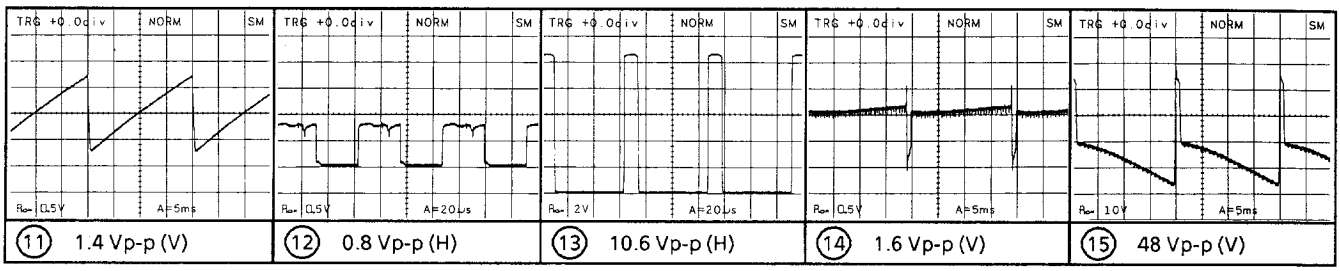
WAVEFORMS 波形图



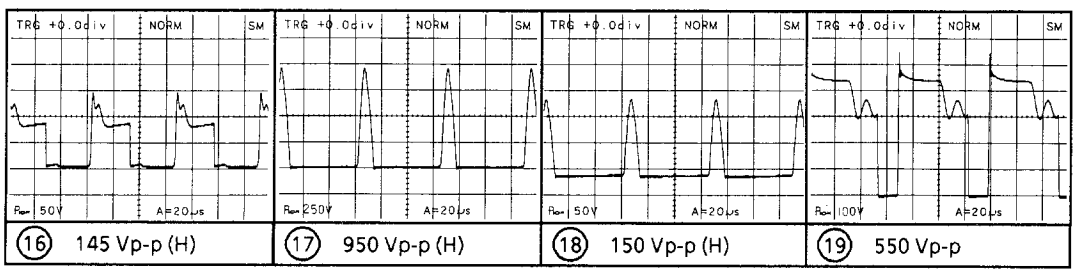
① 1.9 Vp-p (H)　② 1.0 Vp-p (H)　③ 1.5 Vp-p (H)　④ 2.8 Vp-p (H)　⑤ 3.0 Vp-p (H)



⑥ 2.9 Vp-p (H)　⑦ 90 Vp-p (H)　⑧ 78 Vp-p (H)　⑨ 86 Vp-p (H)　⑩ 6.0 Vp-p (H)



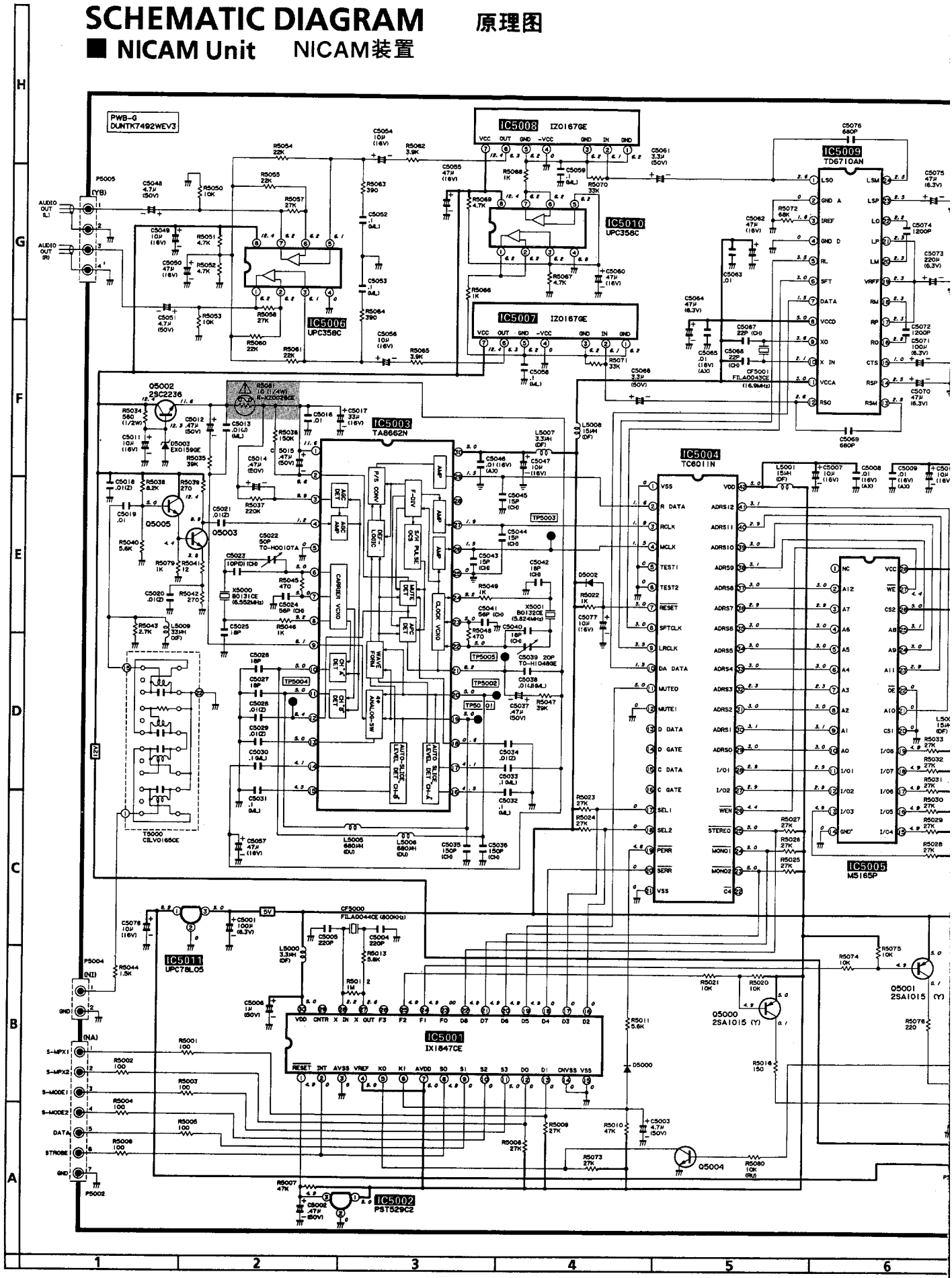
⑪ 1.4 Vp-p (V)　⑫ 0.8 Vp-p (H)　⑬ 10.6 Vp-p (H)　⑭ 1.6 Vp-p (V)　⑮ 48 Vp-p (V)



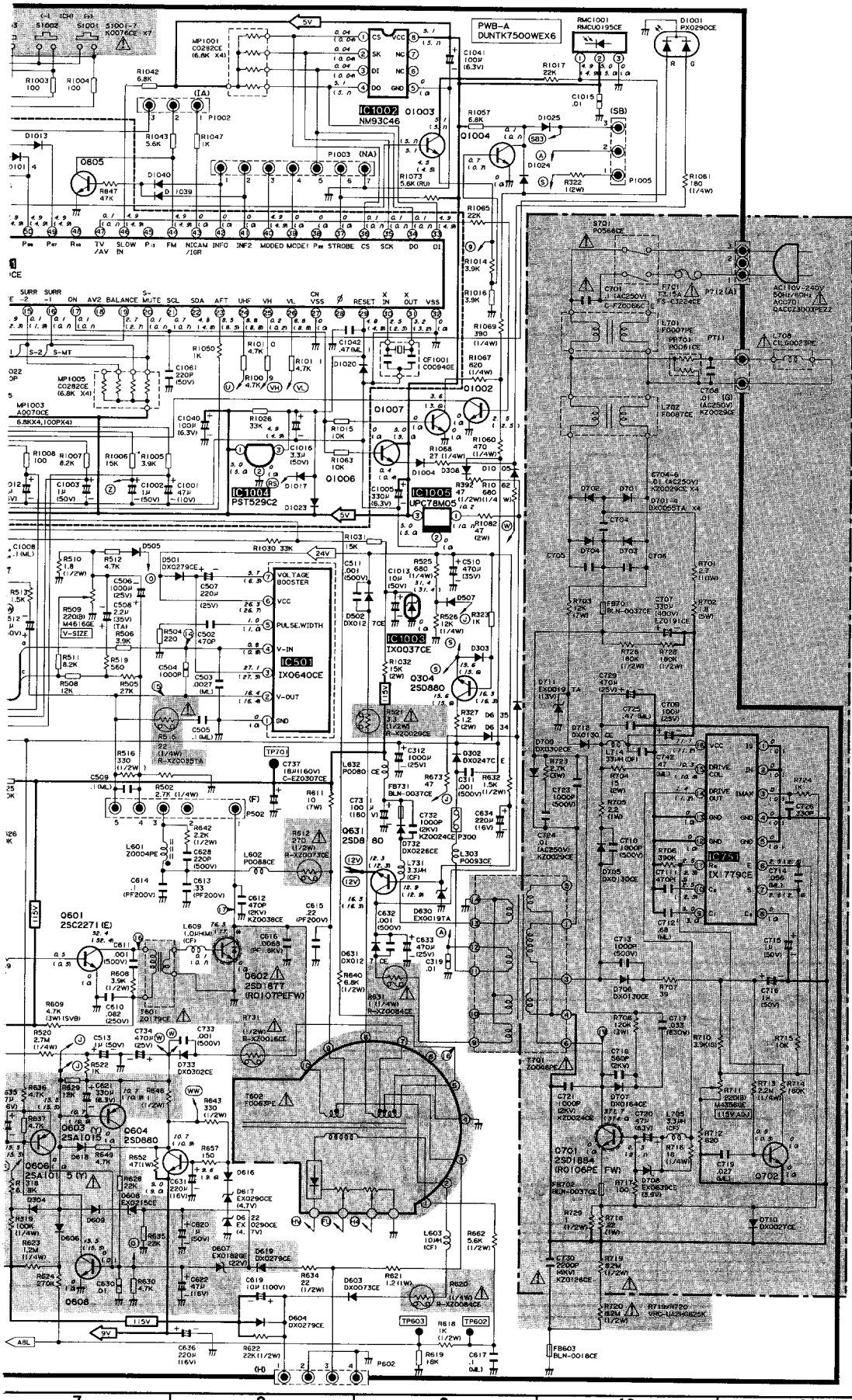
⑯ 145 Vp-p (H)　⑰ 950 Vp-p (H)　⑱ 150 Vp-p (H)　⑲ 550 Vp-p

SCHEMATIC DIAGRAM 原理图

■ NICAM Unit NICAM装置



卡装置与CRT管座装置



CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

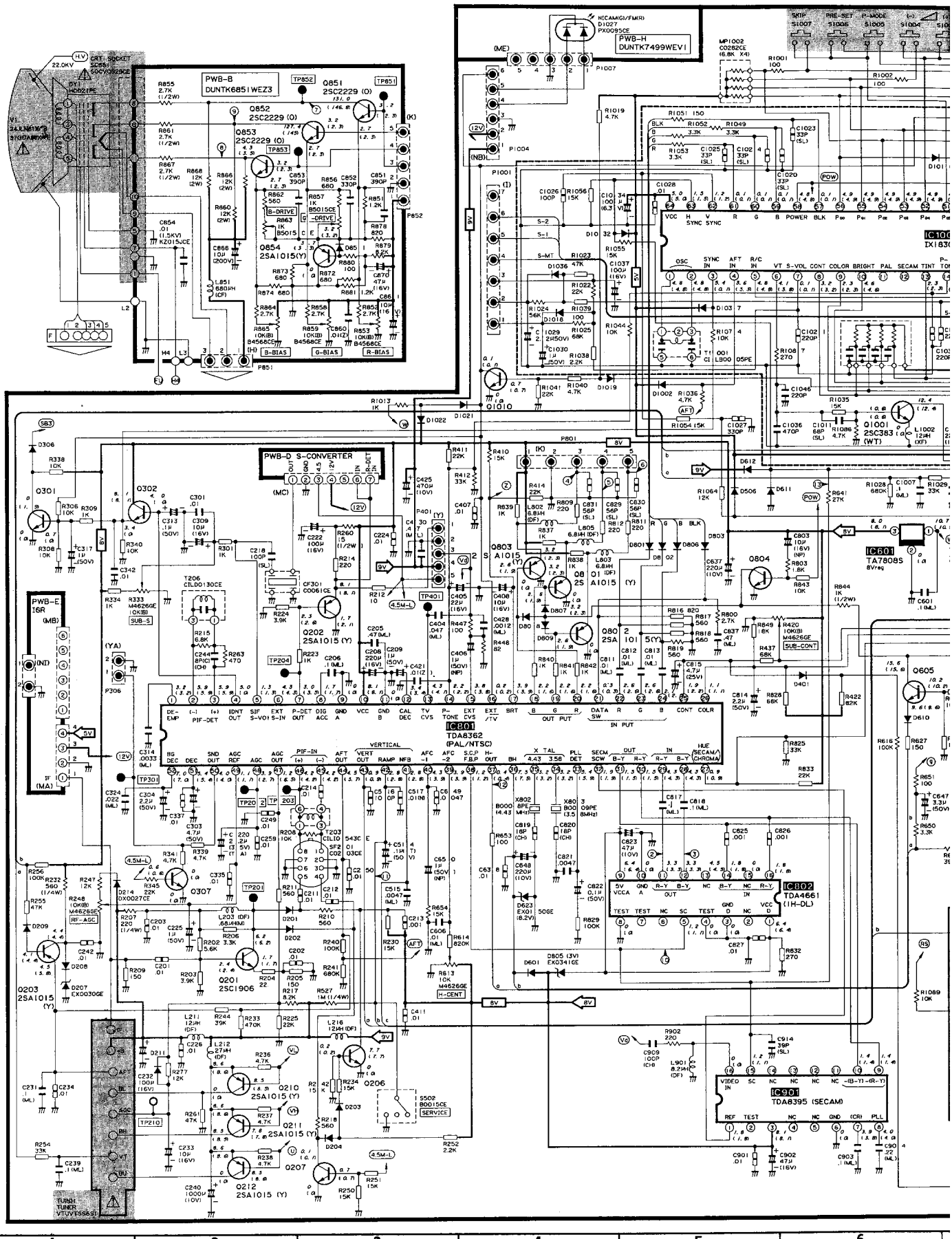
NOTE:
ALL TRANSISTORS ARE 2SC945 OR 2SC1815(GW) AND ALL DIODES ARE 1SS119, UNLESS OTHERWISE NOTED.

注意：
这里的电路原理图均为最初设计原图，与您的机器电路原理图可能有不同之处。

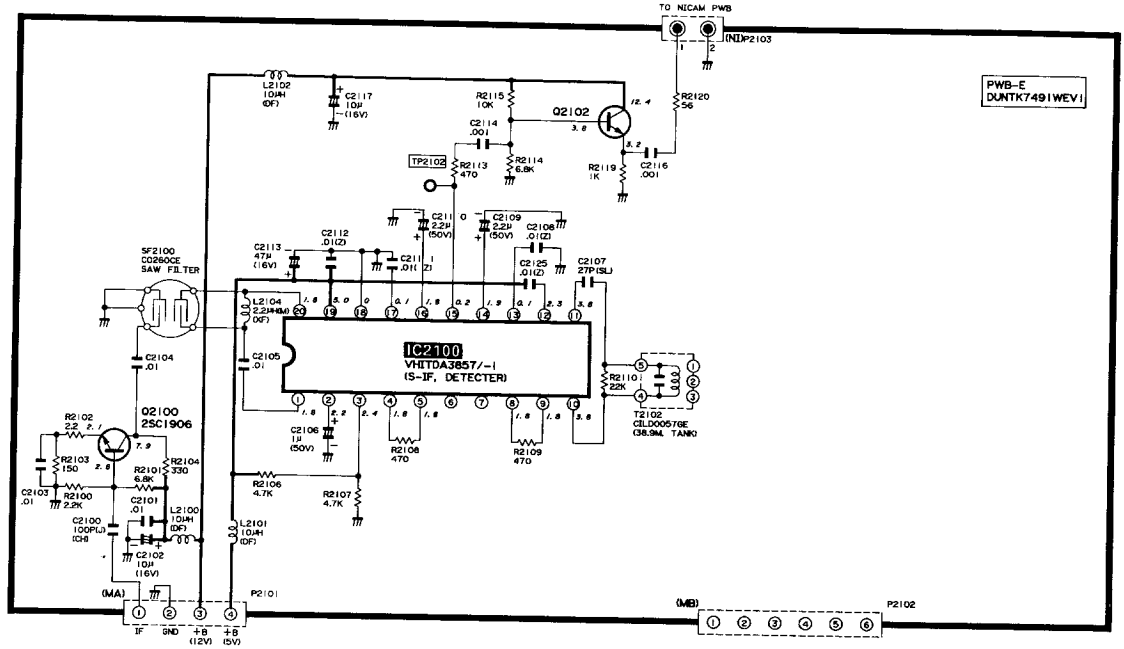
注意：
除特别说明者外，所有的晶体管均为2SC1815(GW)或2SC945，另外，所有的二极管也均为1SS119。

SCHEMATIC DIAGRAM: Mother and CRT Socket Unit

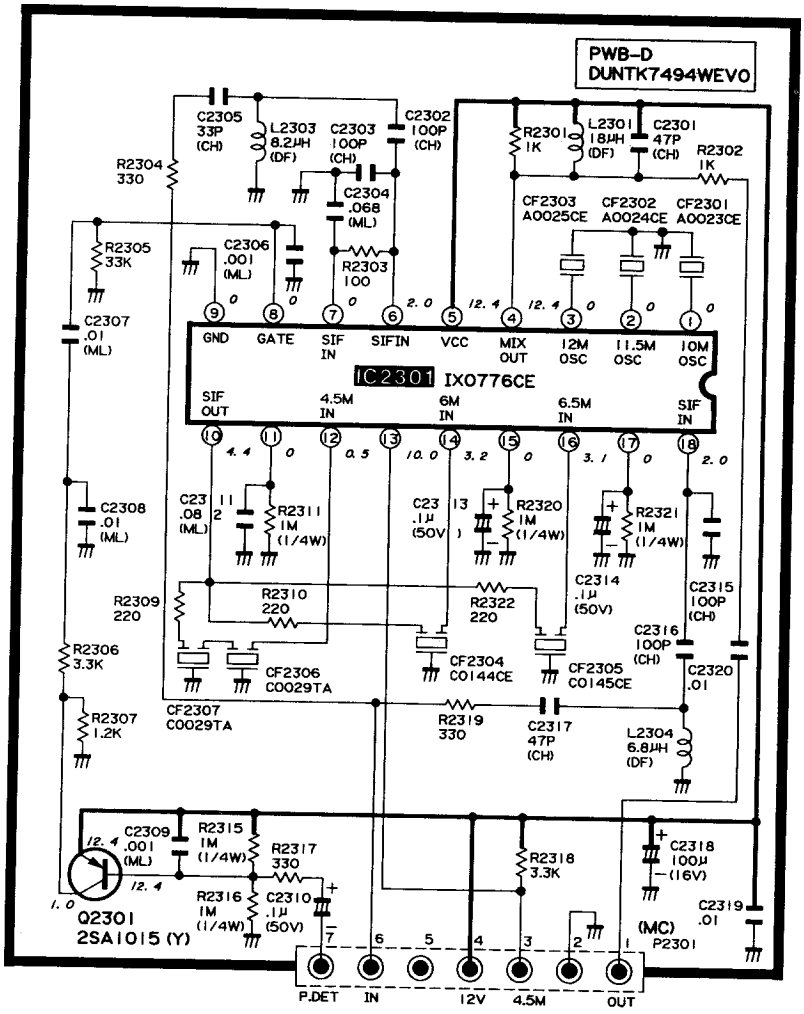
原理图： 母体



■ IGR Unit IGR装置



■ SIF Converter Unit 中音频转换器



CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

NOTE:
ALL TRANSISTORS ARE 2SC945 OR 2SC1815(GW) AND ALL DIODES ARE 1SS119, UNLESS OTHERWISE NOTED.

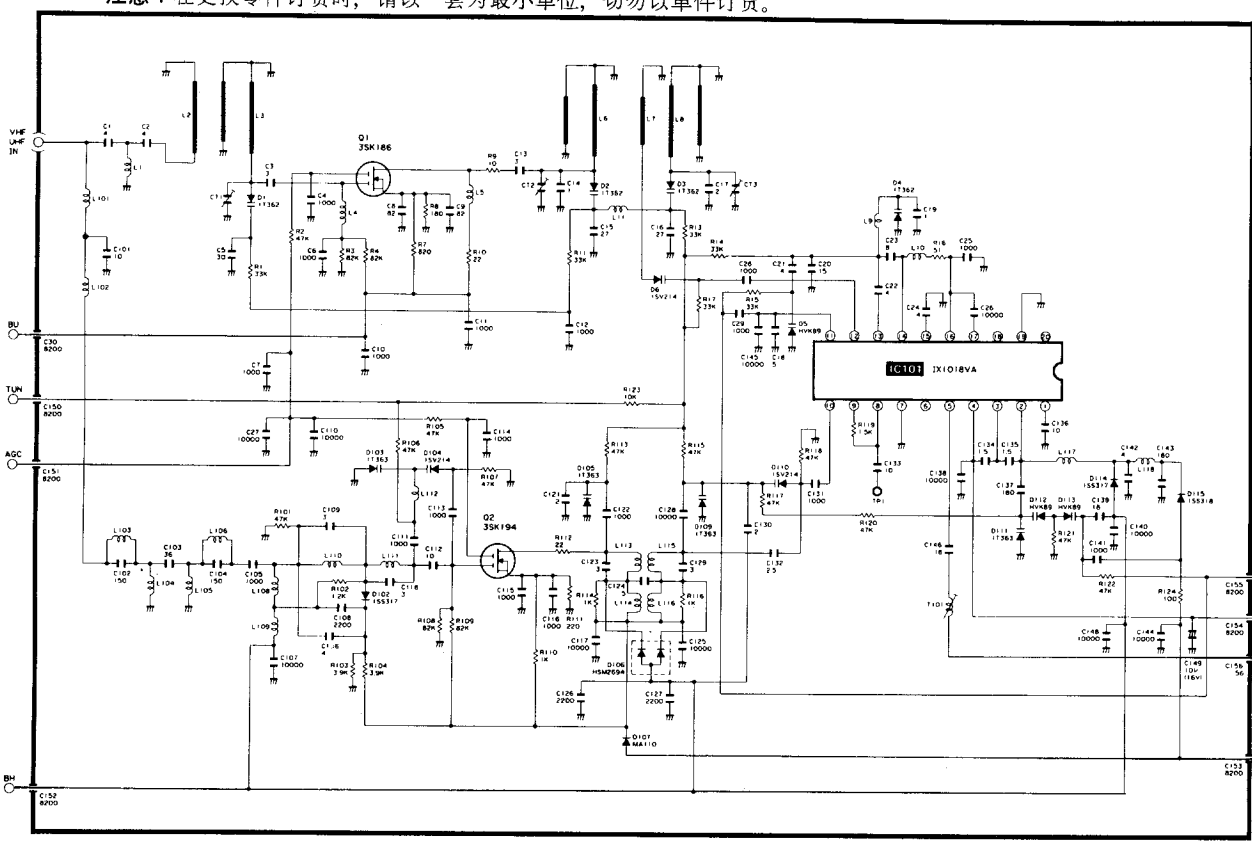
注意：
这里的电路原理图均为最初设计原图，与您的机器电路原理图可能有不同之处。

注意：
除特别说明者外，所有的晶体管均为2SC1815(GW)或2SC945，另外，所有的二极管也均为1SS119。

■ Tuner 调谐器

⚠ VTUVT5S651///

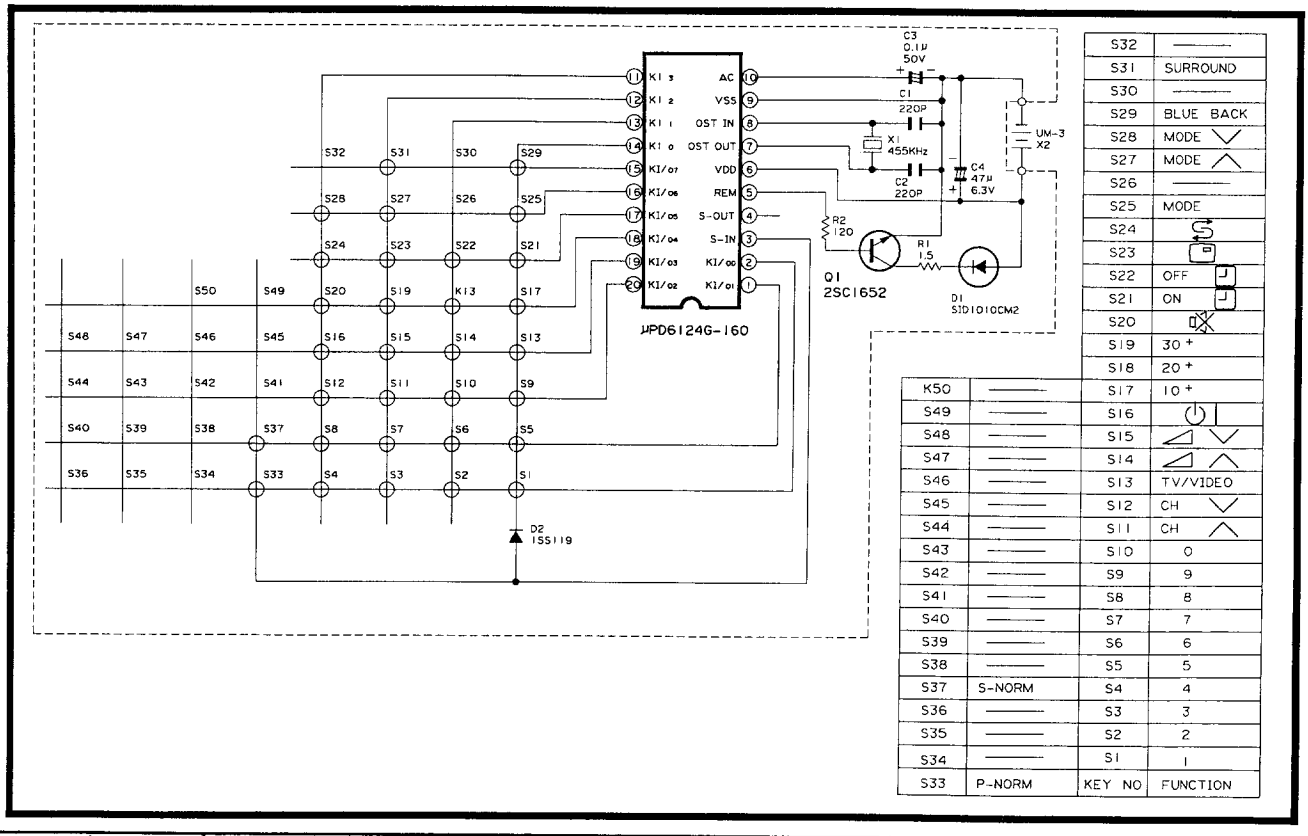
NOTE: The parts here shown are supplied as an assembly but not independently.
注意：在更换零件订货时，请以一套为最小单位，切勿以单件订货。



■ Infrared Remote Control Unit 红外线遥控器

RRMCG0858PESA

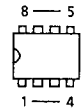
NOTE: The parts here shown are supplied as an assembly but not independently.
注意：在更换零件订货时，请以一套为最小单位，切勿以单件订货。



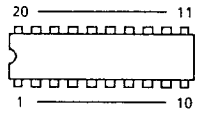
K50	——	S32	——
S49	——	S31	SURROUND
S48	——	S30	——
S47	——	S29	BLUE BACK
S46	——	S28	MODE ▽
S45	——	S27	MODE △
S44	——	S26	——
S43	——	S25	MODE
S42	——	S24	
S41	——	S23	
S40	——	S22	OFF
S39	——	S21	ON
S38	——	S20	
S37	S-NORM	S19	30+
S36	——	S18	20+
S35	——	S17	10+
S34	——	S16	
S33	P-NORM	S15	◁ ▽
		S14	◁ △
		S13	TV/VIDEO
		S12	CH ▽
		S11	CH △
		S10	0
		S9	9
		S8	8
		S7	7
		S6	6
		S5	5
		S4	4
		S3	3
		S2	2
		S1	1
		KEY NO	FUNCTION

SOLID STATE DEVICE BASE DIAGRAMS
固态部件基座图

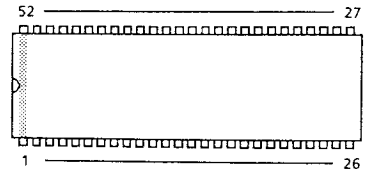
TOP VIEW 上视图



NM93C46



MPC1891



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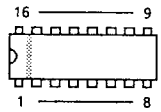

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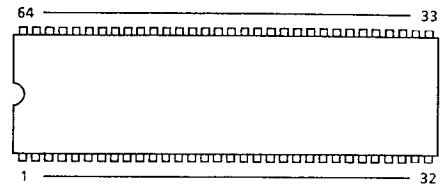
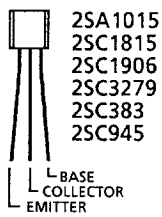
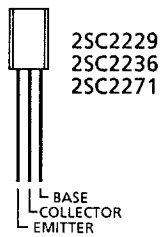


iX1830CE

SIDE VIEW 侧视图





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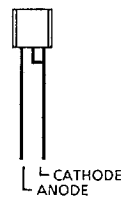

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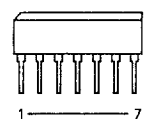

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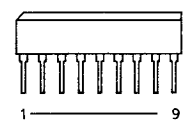

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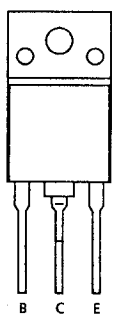

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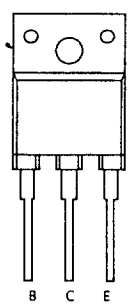

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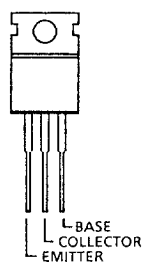

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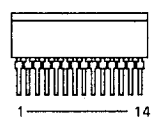

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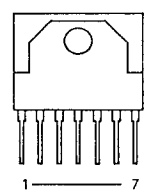

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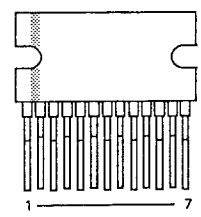

TDA7057Q

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual: electrical components having such features are identified by"⚠" in the Replacement Parts Lists. The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

更换零件表

更换零件

本维修说明书对具有特别安全要求的零件均用标记加以识别：在此更换零件表中，具有特别安全要求的电路元件均用⚠标记以便注意识别。更换零件时，为了用户的安全以及电视机原有的工作性能，务请使用夏普规定零件。否则，可能有导致触电、火灾或其他不测事故发生的可能。

更换零件的订货方法

为了能迅速而确实地接受订货、以及正确无误地按时交货，在订货时请将下列各项明确告知。

1. 型号
2. 参考编号
3. 零件编号
4. 零件名称

MARK ★: SPARE PARTS-DELIVERY SECTION

★标记：更换零件的交货部门

Ref. No.	Part No.	★	Description	Code

PICTURE TUBE

⚠ VB1	VB34JLN61X/*S	R	CRT (14")	CA
DY1	RCiLH0021PEZZ	R	Deflection Yoke	BB
⚠ L708	RCiLG0023PEZZ	R	Degaussing (ADG) Coil	AN
	LHLDC0001PEZZ	R	ADG Coil Holder, ×4 used	AC
	PMAGF3003CEZZ	J	Purity Magnet	AK
	PSPAG0003PEZZ	R	Wedge, Rubber, ×3 used	AD
	MSPRT0001PEFJ	R	CRT Spring	AC

—— End of PICTURE TUBE ——

PRINTED WIRING BOARD ASSEMBLIES
(*NOT REPLACEMENT ITEM*)

PWB-A	DUNTK7500WEX6	-	Mother Unit (with PWB-D, E and H)	—
PWB-B	DUNTK6851WEZ3	-	CRT Socket Unit	—
PWB-C	DUNTK7493WEW6	-	AV Unit	—
PWB-D	DUNTK7494WEV0	-	SIF Converter Unit	—
PWB-E	DUNTK7491WEV1	-	IGR Unit	—
PWB-F	—— *Not Used* ——			
PWB-G	DUNTK7492WEV3	-	NICAM Unit	—
PWB-H	DUNTK7499WEV1	-	LED Unit	—

—— End of P.W.B. ASSEMBLIES ——

PWB-A DUNTK7500WEX6
MOTHER UNIT

TUNER

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

⚠ TU201	VTUVTSS6S1///	J	Tuner, VHF/UHF	BB

INTEGRATED CIRCUITS

IC501	RHiX0640CEZZ	J	Vertical Output	AK
IC601	VHiTA7808S/-1	J	8V Regulator	AD
⚠ IC751	RH-iX1779CEZZ	J	Power Supply	AR
IC801	VHiTDA8362/2E	J	PAL/NTSC TV Processor	BA
IC802	VHiTDA4661/-1	J	64μs Baseband DL	AS
IC901	VHiTDA8395/-1	J	SECAM Decoder	AY
IC1001	RH-iX1830CEZZ	J	Voltage Synthesizer	AY
IC1002	VHiNM93C46/-1	J	AG	
IC1003	RH-iX0037CEZZ	J	Zener IC	AF
IC1004	VHiPST529C2-1	J	AD	
IC1005	VHiUPC78M05H1	J	5V Regulator	AK

TRANSISTORS

Q201	VS2SC1906//1E	J	2SC1906	AC
Q202	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q203	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q206	VS2SC945AP/-1	J	2SC945A(P)	AB
Q207	VS2SC945AP/-1	J	2SC945A(P)	AB
Q210	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q211	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q212	VS2SA1015Y/1E	J	2SA1015(Y)	AC

PWB-A DUNTK7500WEX6
MOTHER UNIT (Continued)

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q301	VS2SC945AP/-1	J	2SC945A(P)	AB
Q302	VS2SC945AP/-1	J	2SC945A(P)	AB
Q304	VS2SD880-G/-1	J	2SD880	AF
Q307	VS2SC945AP/-1	J	2SC945A(P)	AB
Q601	VS2SC2271E/-1	J	2SC2271(E)	AD
⚠ Q602	VS2SD1877//1E	J	2SD1877	AL
⚠ Q603	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q604	VS2SD880-G/-1	J	2SD880	AF
Q605	VS2SC945AP/-1	J	2SC945A(P)	AB
⚠ Q606	VS2SA1015Y/1E	J	2SA1015(Y)	AC
⚠ Q608	VS2SC945AP/-1	J	2SC945A(P)	AB
Q631	VS2SD880-G/-1	J	2SD880	AF
⚠ Q701	VS2SD1884//1E	J	2SD1884	AP
⚠ Q702	VS2SC945AP/-1	J	2SC945A(P)	AB
Q801	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q802	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q803	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q804	VS2SC945AP/-1	J	2SC945A(P)	AB
Q805	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1001	VS2SC383-WT-1	J	2SC383(WT)	AE
Q1002	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1003	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1004	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1006	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1007	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1010	VS2SC945AP/-1	J	2SC945A(P)	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D201	VHD1SS119//1E	J	1SS119	AA
D202	VHD1SS119//1E	J	1SS119	AA
D203	VHD1SS119//1E	J	1SS119	AA
D204	VHD1SS119//1E	J	1SS119	AA
D207	RH-EX0030GEZZ	J	Zener Diode	AB
D208	VHD1SS119//1E	J	1SS119	AA
D209	VHD1SS119//1E	J	1SS119	AA
D211	VHD1SS119//1E	J	1SS119	AA
D214	RH-DX0027CEZZ	J		AE
D302	RH-DX0247CEZZ	J		AE
D303	VHD1SS119//1E	J	1SS119	AA
⚠ D304	VHD1SS119//1E	J	1SS119	AA
D306	VHD1SS119//1E	J	1SS119	AA
D308	VHD1SS119//1E	J	1SS119	AA
D401	VHD1SS119//1E	J	1SS119	AA
D501	RH-DX0279CEZZ	J		AB
D502	RH-DX0127CEZZ	J		AC
D505	VHD1SS119//1E	J	1SS119	AA
D506	VHD1SS119//1E	J	1SS119	AA
D507	VHD1SS119//1E	J	1SS119	AA
D601	VHD1SS119//1E	J	1SS119	AA

DIODES (Continued)

Ref. No.	Part No.	★	Description	Code
D603	RH-DX0073CEZZ	J		AD
D604	RH-DX0279CEZZ	J		AB
⚠ D606	VHD1SS119//1E	J	1SS119	AA
⚠ D607	RH-EX0182GEZZ	J	Zener Diode	AB
⚠ D608	RH-EX0215CEZZ	J	Zener Diode	AB
⚠ D609	VHD1SS119//1E	J	1SS119	AA
D610	VHD1SS119//1E	J	1SS119	AA
D611	VHD1SS119//1E	J	1SS119	AA
D612	VHD1SS119//1E	J	1SS119	AA
D616	VHD1SS119//1E	J	1SS119	AA
D617	RH-EX0290CEZZ	J	Zener Diode	AA
⚠ D618	VHD1SS119//1E	J	1SS119	AA
⚠ D619	RH-DX0279CEZZ	J		AB
D622	RH-EX0290CEZZ	J	Zener Diode	AA
D623	RH-EX0150GEZZ	J	Zener Diode	AA
D630	RH-EX0019TAZZ	J	Zener Diode	AB
D631	RH-DX0127CEZZ	J		AC
D634	VHD1SS119//1E	J	1SS119	AA
D635	VHD1SS119//1E	J	1SS119	AA
⚠ D700	RH-EX0092CEZZ	J	Zener Diode	AB
⚠ D701	RH-DX0055TAZZ	J		AD
⚠ D702	RH-DX0055TAZZ	J		AD
⚠ D703	RH-DX0055TAZZ	J		AD
⚠ D704	RH-DX0055TAZZ	J		AD
⚠ D705	RH-DX0130CEZZ	J		AE
⚠ D706	RH-DX0130CEZZ	J		AE
⚠ D707	RH-DX0164CEZZ	J		AC
⚠ D708	RH-EX0639CEZZ	J	Zener Diode	AB
⚠ D709	RH-DX0302CEZZ	J		AC
⚠ D710	RH-DX0027CEZZ	J		AE
⚠ D711	RH-EX0019TAZZ	J	Zener Diode	AB
⚠ D712	RH-DX0130CEZZ	J		AE
D732	RH-DX0226CEZZ	J		AC
D733	RH-DX0302CEZZ	J		AC
D801	VHD1SS119//1E	J	1SS119	AA
D802	VHD1SS119//1E	J	1SS119	AA
D803	VHD1SS119//1E	J	1SS119	AA
D805	RH-EX0341GEZZ	J	Zener Diode	AA
D806	VHD1SS119//1E	J	1SS119	AA
D807	VHD1SS119//1E	J	1SS119	AA
D808	VHD1SS119//1E	J	1SS119	AA
D809	VHD1SS119//1E	J	1SS119	AA
D1001	RH-PX0290CEZZ	J	LED, Red/Green	AC
D1002	VHD1SS119//1E	J	1SS119	AA
D1004	VHD1SS119//1E	J	1SS119	AA
D1005	VHD1SS119//1E	J	1SS119	AA
D1013	VHD1SS119//1E	J	1SS119	AA
D1014	VHD1SS119//1E	J	1SS119	AA
D1016	VHD1SS119//1E	J	1SS119	AA
D1017	VHD1SS119//1E	J	1SS119	AA
D1018	VHD1SS119//1E	J	1SS119	AA
D1019	VHD1SS119//1E	J	1SS119	AA
D1020	VHD1SS119//1E	J	1SS119	AA
D1021	VHD1SS119//1E	J	1SS119	AA

PWB-A DUNTK7500WEX6
MOTHER UNIT (Continued)

DIODES (Continued)

Ref. No.	Part No.	★	Description	Code
D1022	VHD1SS119//1E	J	1SS119	AA
D1023	VHD1SS119//1E	J	1SS119	AA
D1024	VHD1SS119//1E	J	1SS119	AA
D1025	VHD1SS119//1E	J	1SS119	AA
D1031	VHD1SS119//1E	J	1SS119	AA
D1032	VHD1SS119//1E	J	1SS119	AA
D1036	VHD1SS119//1E	J	1SS119	AA
D1037	VHD1SS119//1E	J	1SS119	AA
D1039	VHD1SS119//1E	J	1SS119	AA
D1040	VHD1SS119//1E	J	1SS119	AA

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
MP1001	RMPTC0282CEZZ	J	Resistor 6.8k×4	AC
MP1002	RMPTC0282CEZZ	J	Resistor 6.8k×4	AC
MP1003	RMPTA0070CEZZ	J	Resistor 6.8k×4, Capacitor 100p×4	AE
MP1005	RMPTC0282CEZZ	J	Resistor 6.8k×4	AC
⚠ PR701	RMPTP0061CEZZ	J	Positive Coefficient Thermistor	AV
X802	RCRSB0008PEZZ	R	Crystal, 4.43MHz	AH
X803	RCRSB0009PEZZ	R	Crystal, 3.58MHz	AL

COILS AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
CF301	RFiLC0061CEZZ	J	Ceramic Filter	AF
CF1001	RFiLC0094GEZZ	J	Ceramic Filter	AC
L203	VP-DFR68M0000	J	Coil, 0.68μH	AB
L211	VP-DF120K0000	J	Coil, 12μH	AB
L212	VP-DF270K0000	J	Coil, 27μH	AB
L216	VP-DF120K0000	J	Coil, 12μH	AB
L303	RCiLP0093CEZZ	J	Coil	AE
L601	RCiLZ0004PEZZ	R	Coil	AN
L602	RCiLP0088CEZZ	J	Coil	AG
L603	VP-CF100K0000	J	Coil, 10μH	AB
L609	VP-CF1R0M0000	J	Coil, 1μH	AB
L632	RCiLP0080CEZZ	J	Coil	AF
⚠ L701	RCiLF0007PEZZ	R	Coil, Line Filter	AL
⚠ L702	RCiLF0087CEZZ	J	Coil, Line Filter	AL
⚠ L705	VP-CF3R3K0000	J	Coil, 3.3μH	AB
⚠ L714	VP-DF330K0000	J	Coil, 33μH	AB
L731	VP-CF3R3K0000	J	Coil, 3.3μH	AB
L802	VP-DF6R8K0000	J	Coil, 6.8μH	AB
L803	VP-DF6R8K0000	J	Coil, 6.8μH	AB
L805	VP-DF6R8K0000	J	Coil, 6.8μH	AB
L901	VP-DF8R2K0000	J	Coil, 8.2μH	AB
L1002	VP-XF120K0000	J	Coil, 12μH	AB
SF201	RFiLC0203CEZZ	J	Surface Accoustic Wave Filter	AN

COILS AND TRANSFORMERS (Continued)

Ref. No.	Part No.	★	Description	Code
T203	RCiLi0543CEZZ	J	S.A.W. Matching Trans.	AD
T206	RCiLD0130CEZZ	J	PIF Detector Coil	AD
⚠ T601	RTRNZ0179CEZZ	J	Horizontal Drive Trans.	AE
⚠ T602	RTRNF0063PEZZ	R	Flyback Trans. (F.B.T.) W/ Focus, Screen Controls	BE
⚠ T701	RTRNZ0046PEZZ	R	Power Regulator Trans.	AR
T1001	RCiLB0005PEZZ	R	Sign Position Adj. Coil	AF

CONTROLS

Ref. No.	Part No.	★			Description	Code
R248	RVR-M4626GEZZ	J	10k(B)		RF-AGC	AB
R333	RVR-M4626GEZZ	J	10k(B)		Sub-Sound	AB
R420	RVR-M4626GEZZ	J	10k(B)		Sub-Contrast	AB
R509	RVR-M4616GEZZ	J	220(B)		Vertical Size	AB
R613	RVR-M4626GEZZ	J	10k(B)		Horiz. Center	AB
⚠ R711	RVR-M4356GEZZ	J	220(B)		115V Adj.	AB

CAPACITORS

Ref. No.	Part No.	★				Description	Code
C201	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C202	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C203	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C205	VCFYHA1HA474J	J	0.47		50V	M. Polyester	AD
C206	VCFYHA1HA104J	J	0.1		50V	M. Polyester	AB
C208	VCEAGA1CW227M	J	220		16V	Electrolytic	AC
C209	VCEAGA1HW105M	J	1		50V	Electrolytic	AC
C211	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C212	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C213	VCKYMN1HB102K	J	1000p		50V	Ceramic	AA
C214	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C218	VCCSPA1HL101J	J	100p		50V	Ceramic	AA
C220	VCSATA1VE225K	J	2.2		35V	Tantalum	AC
C222	VCEAGA1CW107M	J	100		16V	Electrolytic	AB
C224	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C225	VCEAGA1HW105M	J	1		50V	Electrolytic	AC
C226	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C231	VCFYHA1HA104J	J	0.1		50V	M. Polyester	AB
C232	VCEAGA1CW107M	J	100		16V	Electrolytic	AB
C233	VCEAGA1CW106M	J	10		16V	Electrolytic	AA
C234	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C239	VCFYHA1HA104J	J	0.1		50V	M. Polyester	AB
C240	VCEAGA1AW108M	J	1000		10V	Electrolytic	AC
C242	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C244	VCCCPA1HH8R0C	J	8p		50V	Ceramic	AA
C249	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C250	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C259	VCKYMN1CY103N	J	0.01		16V	Ceramic	AA
C301	VCKYD41CY103N	J	0.01		16V	Ceramic	AA
C303	VCEAGA1HW475M	J	4.7		50V	Electrolytic	AB
C304	VCEAGA1HW225M	J	2.2		50V	Electrolytic	AB
C309	VCEAGA1CW106M	J	10		16V	Electrolytic	AA
C311	VCKYPA2HB102K	J	1000p		500V	Ceramic	AA

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MOTHER UNIT (Continued)

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C312	VCEAGA1EW108M	J	1000 25V Electrolytic	AD
C313	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C314	VCQYSH1HM332K	J	3300p50V Mylar	AA
C317	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C319	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C324	VCQYSH1HM223K	J	0.022 50V Mylar	AB
C335	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C337	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C342	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C404	VCFYHA1HA473J	J	0.047 50V M. Polyester	AB
C405	VCEAGA1CW226M	J	22 16V Electrolytic	AA
C406	VCE9GA1HW105M	J	1 50V Elect. (N.P)	AB
C407	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C408	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C411	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C421	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C425	VCEAGA1AW477M	J	470 10V Electrolytic	AC
C428	VCQYTA1HM122J	J	1200p50V Mylar	AA
C430	VCFYHA1HA474J	J	0.47 50V M. Polyester	AD
C502	VCKYPA1HB471K	J	470p 50V Ceramic	AA
C503	VCQYSH1HM272K	J	2700p50V Mylar	AA
C504	VCKYMN1HB102K	J	1000p50V Ceramic	AA
C505	VCFYHA1HA104J	J	0.1 50V M. Polyester	AB
C506	VCEAGA1EW108M	J	1000 25V Electrolytic	AD
C507	VCEAGA1EW227M	J	220 25V Electrolytic	AC
C508	VCSATA1VE225K	J	2.2 35V Tantalum	AC
C509	VCFYHA1HA104J	J	0.1 50V M. Polyester	AB
C510	VCEAGA1VW477M	J	470 35V Electrolytic	AD
C511	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C512	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C513	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C514	VCEAGA1HW104T	J	0.1 50V Electrolytic	AB
C515	VCQYSH1HM472K	J	4700p50V Mylar	AA
C516	VCKYMN1HB101K	J	100p 50V Ceramic	AA
C517	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C601	VCFYHA1HA104J	J	0.1 50V M. Polyester	AB
C606	VCQYSH1HM103K	J	0.01 50V Mylar	AA
C610	VCFYSB2EB823J	J	0.082 250V M. Polyester	AD
C611	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C612	RC-KZ0038CEZZ	J	470p 2kV Ceramic	AB
C613	VCFPPD2DB334J	J	0.33 200V M. Polyester	AF
C614	VCQPSC2DA104J	J	0.1 200V Polypro Film	AC
C615	VCQPSD2DA224J	J	0.22 200V Polypro Film	AD
C616	VCFPPD3CA682H	J	6800p1.6kV M. Polyester	AE
C617	VCQYSH1HM104K	J	0.1 50V Mylar	AB
C619	VCEAGA2AW106M	J	10 100V Electrolytic	AC
⚠ C620	VCEAGA1HW105M	J	1 50V Electrolytic	AC
⚠ C621	VCEAGA0JW337M	J	330 6.3V Electrolytic	AB
⚠ C622	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C628	VCKYPA2HB221K	J	220p 500V Ceramic	AA
⚠ C630	VCKYMN1CY103N	J	0.01 16V Ceramic	AA

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C631	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C632	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C633	VCEAGA1EW477M	J	470 25V Electrolytic	AD
C634	VCEAGA1CW227M	J	220 16V Electrolytic	AC
⚠ C635	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C636	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C637	VCEAGA1AW227M	J	220 10V Electrolytic	AA
C638	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C647	VCEAGA1HW335M	J	3.3 50V Electrolytic	AB
C648	VCEAGA1AW227M	J	220 10V Electrolytic	AB
C649	VCKYMN1CX472M	J	4700p16V Ceramic	AA
C650	VCE9AA1HW105M	J	1 50V Elect. (N.P)	AB
⚠ C701	RC-FZ0066CEZZ	J	0.1 AC250V Special	AE
⚠ C704	RC-KZ0029CEZZ	J	0.01 AC250V Ceramic	AC
⚠ C705	RC-KZ0029CEZZ	J	0.01 AC250V Ceramic	AC
⚠ C706	RC-KZ0029CEZZ	J	0.01 AC250V Ceramic	AC
⚠ C707	RC-EZ0191CEZZ	J	330 400V Electrolytic	AS
⚠ C708	RC-KZ0029CEZZ	J	0.01 AC250V Ceramic	AC
⚠ C709	VCEAGA1EW107M	J	100 25V Electrolytic	AD
⚠ C710	VCKYPA2HB102K	J	1000p500V Ceramic	AA
⚠ C711	RC-QZA471TAYJ	J	470p Mylar	AB
⚠ C712	VCFYHA1HA684J	J	0.68 50V M. Polyester	AD
⚠ C713	VCKYPA2HB102K	J	1000p500V Ceramic	AA
⚠ C714	VCFYHA1HA563J	J	0.056 50V M. Polyester	AB
⚠ C715	VCEAGA1HW105M	J	1 50V Electrolytic	AC
⚠ C716	VCEAGA1HW105M	J	1 50V Electrolytic	AC
⚠ C717	VCQPSC2JA333K	J	0.033 630V Polypro Film	AB
⚠ C718	VCKYPH3DB561K	J	560p 2kV Ceramic	AC
⚠ C719	VCQYSH1HM273K	J	0.027 50V Mylar	AB
⚠ C720	VCEAGA1JW476M	J	47 63V Electrolytic	AB
⚠ C721	RC-KZ0024CEZZ	J	1000p2kV Ceramic	AC
⚠ C723	VCKYPA2HB102K	J	1000p500V Ceramic	AA
⚠ C724	RC-KZ0029CEZZ	J	0.01 AC250V Ceramic	AC
⚠ C725	VCFYHA1HA474J	J	0.47 50V M. Polyester	AD
⚠ C726	VCKYPA1HB331K	J	330p 50V Ceramic	AA
⚠ C729	VCEAGA1CW477M	J	470 16V Electrolytic	AC
⚠ C730	RC-KZ0128CEZZ	J	2200p4kV Ceramic	AD
C731	VCEAAH2CW107M	J	100 160V Electrolytic	AE
C732	RC-KZ0024CEZZ	J	1000p2kV Ceramic	AC
C733	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C734	VCEAGA1EW477M	J	470 25V Electrolytic	AD
C737	RC-EZ0307CEZZ	J	18 160V Electrolytic	AG
C742	VCFYHA1HA474J	J	0.47 50V M. Polyester	AD
C803	VCE9GA1CW106M	J	10 16V Elect. (N.P)	AB
C811	VCQYSH1HM103K	J	0.01 50V Mylar	AA
C812	VCQYSH1HM103K	J	0.01 50V Mylar	AA
C813	VCQYSH1HM103K	J	0.01 50V Mylar	AA
C814	VCEAGA1HW225M	J	2.2 50V Electrolytic	AB
C815	VCEAGA1EW475M	J	4.7 25V Electrolytic	AA
C817	VCFYHA1HA104J	J	0.1 50V M. Polyester	AB
C818	VCFYHA1HA104J	J	0.1 50V M. Polyester	AB
C819	VCCCMN1HH180J	J	18p 50V Ceramic	AA
C820	VCCCMN1HH180J	J	18p 50V Ceramic	AA
C821	VCKYPA1HB472K	J	4700p50V Ceramic	AA

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MOTHER UNIT (Continued)

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description			Code
C822	VCEAGA1HW104M	J	0.1	50V	Electrolytic	AA
C823	VCEAGA1AW476M	J	47	10V	Electrolytic	AA
C825	VCKYMN1HB102K	J	1000p	50V	Ceramic	AA
C826	VCKYMN1HB102K	J	1000p	50V	Ceramic	AA
C827	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C829	VCCSMN1HL560J	J	56p	50V	Ceramic	AA
C830	VCCSMN1HL560J	J	56p	50V	Ceramic	AA
C831	VCCSMN1HL560J	J	56p	50V	Ceramic	AA
C837	VCFYHA1HA474J	J	0.47	50V	M. Polyester	AD
C901	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C902	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C903	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C904	VCFYHA1HA224J	J	0.22	50V	M. Polyester	AC
C909	VCCCPA1HH101J	J	100p	50V	Ceramic	AA
C914	VCCCPA1HL390J	J	39p	50V	Ceramic	AA
C1001	VCEAGA1AW476M	J	47	10V	Electrolytic	AA
C1002	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1003	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1005	VCEAGA0JW337M	J	330	6.3V	Electrolytic	AB
C1007	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C1008	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C1009	VCKYMN1HB221K	J	220p	50V	Ceramic	AA
C1011	VCCSPA1HL680J	J	68p	50V	Ceramic	AA
C1012	VCEAGA1CW226M	J	22	16V	Electrolytic	AA
C1013	VCEAGA1HW106M	J	10	50V	Electrolytic	AC
C1015	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C1016	VCEAGA1HW335M	J	3.3	50V	Electrolytic	AB
C1020	VCCSMN1HL330J	J	33p	50V	Ceramic	AA
C1021	VCKYMN1HB221K	J	220p	50V	Ceramic	AA
C1022	VCKYMN1HB221K	J	220p	50V	Ceramic	AA
C1023	VCCSMN1HL330J	J	33p	50V	Ceramic	AA
C1024	VCCSMN1HL330J	J	33p	50V	Ceramic	AA
C1025	VCCSMN1HL330J	J	33p	50V	Ceramic	AA
C1026	VCKYMN1HB101K	J	100p	50V	Ceramic	AA
C1027	VCKYMN1HB331K	J	330p	50V	Ceramic	AA
C1028	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C1029	VCEAGA1HW225M	J	2.2	50V	Electrolytic	AB
C1030	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1034	VCEAGA0JW107M	J	100	6.3V	Electrolytic	AB
C1035	VCKYMN1HB221K	J	220p	50V	Ceramic	AA
C1036	VCKYD41HB471K	J	470p	50V	Ceramic	AA
C1037	VCEAGA1CW107M	J	100	16V	Electrolytic	AB
C1040	VCEAGA0JW107M	J	100	6.3V	Electrolytic	AB
C1041	VCEAGA0JW107M	J	100	6.3V	Electrolytic	AB
C1042	VCFYHA1HA474J	J	0.47	50V	M. Polyester	AD
C1046	VCKYPA1HB221K	J	220p	50V	Ceramic	AA
C1061	VCKYPA1HB221K	J	220p	50V	Ceramic	AA

RESISTORS

Ref. No.	Part No.	★				Code
R202	VRD-MN2BE562J	J	5.6k	1/8W	Carbon	AA
R203	VRD-MN2BE392J	J	3.9k	1/8W	Carbon	AA
R204	VRD-MN2BE220J	J	22	1/8W	Carbon	AA
R205	VRD-MN2BE151J	J	150	1/8W	Carbon	AA
R206	VRD-MN2BE332J	J	3.3k	1/8W	Carbon	AA
R207	VRD-RA2EE221J	J	220	1/4W	Carbon	AA
R208	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R209	VRD-MN2BE151J	J	150	1/8W	Carbon	AA
R210	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R211	VRD-MN2BE561J	J	560	1/8W	Carbon	AA
R212	VRD-MN2BE100J	J	10	1/8W	Carbon	AA
R214	VRD-MN2BE221J	J	220	1/8W	Carbon	AA
R215	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R217	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
R218	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R223	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R224	VRD-MN2BE392J	J	3.9k	1/8W	Carbon	AA
R225	VRD-MN2BE223J	J	22k	1/8W	Carbon	AA
R230	VRD-MN2BE153J	J	15k	1/8W	Carbon	AA
R232	VRD-RA2EE561J	J	560	1/4W	Carbon	AA
R233	VRD-MN2BE474J	J	470k	1/8W	Carbon	AA
R234	VRD-MN2BE153J	J	15k	1/8W	Carbon	AA
R236	VRD-MN2BE472J	J	4.7k	1/8W	Carbon	AA
R237	VRD-MN2BE472J	J	4.7k	1/8W	Carbon	AA
R238	VRD-MN2BE472J	J	4.7k	1/8W	Carbon	AA
R240	VRD-MN2BE104J	J	100k	1/8W	Carbon	AA
R241	VRD-MN2BE684J	J	680k	1/8W	Carbon	AA
R242	VRD-MN2BE153J	J	15k	1/8W	Carbon	AA
R244	VRD-MN2BE393J	J	39k	1/8W	Carbon	AA
R247	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R248	*See Controls*					
R250	VRD-MN2BE153J	J	15k	1/8W	Carbon	AA
R251	VRD-MN2BE153J	J	15k	1/8W	Carbon	AA
R252	VRD-MN2BE222J	J	2.2k	1/8W	Carbon	AA
R254	VRD-MN2BE333J	J	33k	1/8W	Carbon	AA
R255	VRD-MN2BE473J	J	47k	1/8W	Carbon	AA
R256	VRD-MN2BE104J	J	100k	1/8W	Carbon	AA
R260	VRD-RM2HD150J	J	15	1/2W	Carbon	AA
R261	VRD-MN2BE473J	J	47k	1/8W	Carbon	AA
R263	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R277	VRD-MN2BE123J	J	12k	1/8W	Carbon	AA
R301	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R306	VRD-MN2BE103J	J	10k	1/8W	Carbon	AA
R308	VRD-MN2BE103J	J	10k	1/8W	Carbon	AA
R309	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
⚠ R318	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
⚠ R319	VRD-RA2EE104J	J	100k	1/4W	Carbon	AA
R322	VRN-VV3DB1R0J	J	1	2W	Metal Film	AB
R323	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R334	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R327	VRN-VV3DB1R2J	J	1.2	2W	Metal Film	AA
R333	*See Controls*					
R334	VRD-MN2BE102J	J	1k	1/8W	Carbon	AA
R338	VRD-MN2BE103J	J	10k	1/8W	Carbon	AA

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MOTHER UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R339	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R340	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R341	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R345	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R392	VRD-RM2HD470J	J	47 1/2W Carbon	AA
R410	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R411	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
R412	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R414	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
R420	*See Controls*			
R422	VRD-MN2BE823J	J	82k 1/8W Carbon	AA
R437	VRD-MN2BE683J	J	68k 1/8W Carbon	AA
R447	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R448	VRD-RA2BE820J	J	82 1/8W Carbon	AA
R502	VRD-RA2EE272J	J	2.7k 1/4W Carbon	AA
R504	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R505	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R506	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R508	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R509	*See Controls*			
R510	VRD-RM2HD1R8J	J	1.8 1/2W Carbon	AA
R511	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R512	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R513	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
⚠ R515	RR-XZ0035TAZZ	J	22 1/4W Fuse Resistor	AB
R516	VRD-RM2HD331J	J	330 1/2W Carbon	AA
R519	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R520	VRD-RA2EE275J	J	2.7M 1/4W Carbon	AA
⚠ R521	RR-XZ0029CEZZ	J	3.3 1/2W Fuse Resistor	AB
R522	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R525	VRD-RA2EE681J	J	680 1/4W Carbon	AA
R526	VRD-RA2EE123J	J	12k 1/4W Carbon	AA
R527	VRD-RA2EE105J	J	1M 1/4W Carbon	AA
R608	VRD-RM2HD392J	J	3.9k 1/2W Carbon	AA
R609	VRS-SV3LB472J	J	4.7k 3W Metal Oxide	AC
R611	VRD-RA3NE100J	J	10 7W Carbon	
⚠ R612	RR-XZ0073CEZZ	J	270 1/2W Fuse Resistor	AB
R613	*See Controls*			
R614	VRD-MN2BE824J	J	820k 1/8W Carbon	AA
R616	VRD-RA2BE104J	J	100k 1/8W Carbon	AA
R618	VRS-PU2HB102J	J	1k 1/2W Metal Oxide	AA
R619	VRD-MN2BE183J	J	18k 1/8W Carbon	AA
⚠ R620	RR-XZ0084CEZZ	J	1 1/4W Fuse Resistor	AB
R621	VRN-VV3AB1R2J	J	1.2 1W Metal Film	AA
R622	VRD-RM2HD223J	J	22k 1/2W Carbon	AA
⚠ R623	VRD-RA2EE125J	J	1.2M 1/4W Carbon	AA
⚠ R624	VRD-RA2BE274J	J	270k 1/8W Carbon	AA
R625	VRD-MN2BE104J	J	100k 1/8W Carbon	AA
R626	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R627	VRD-MN2BE151J	J	150 1/8W Carbon	AA
⚠ R628	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
⚠ R629	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
⚠ R630	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
⚠ R631	RR-XZ0084CEZZ	J	1 1/4W Fuse Resistor	AB
R632	VRD-RM2HD152J	J	1.5k 1/2W Carbon	AA
R634	VRD-RM2HD220J	J	2.2k 1/2W Carbon	AA
⚠ R635	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
⚠ R636	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
⚠ R637	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R640	VRD-RM2HD682J	J	6.8k 1/2W Carbon	AA
R641	VRD-RA2BE273J	J	27k 1/8W Carbon	AA
R642	VRD-RM2HD222J	J	2.2k 1/2W Carbon	AA
R643	VRD-RM2HD331J	J	330 1/2W Carbon	AA
⚠ R648	VRD-RM2HD1R0J	J	1 1/2W Carbon	AA
⚠ R649	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R650	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R651	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R652	VRS-VV3AB470J	J	47 1W Metal Oxide	AA
R653	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R654	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R657	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R659	VRD-RA2BE391J	J	390 1/8W Carbon	AA
R662	VRD-RM2HD562J	J	5.6k 1/2W Carbon	AA
R673	VRD-RA2BE470J	J	47 1/8W Carbon	AA
⚠ R701	VRW-KX4AC2R7K	J	2.7 10W Cement	AD
⚠ R702	VRW-KX3HC1R8K	J	1.8 5W Cement	AC
⚠ R703	VRW-KX3NC123J	J	12k 7W Cement	AD
⚠ R704	VRS-VV3DB150J	J	15 2W Metal Oxide	AA
⚠ R705	VRN-VV3AB2R2J	J	2.2 1W Metal Film	AA
⚠ R706	VRD-RA2BE394J	J	390k 1/8W Carbon	AA
⚠ R707	VRD-RA2BE390J	J	39 1/8W Carbon	AA
⚠ R708	VRS-SV3LB124J	J	120k 3W Metal Oxide	AC
⚠ R710	VRD-RA2BE392G	J	3.9k 1/8W Carbon	AA
⚠ R711	*See Controls*			
⚠ R712	VRD-RA2BE821J	J	820 1/8W Carbon	AA
⚠ R713	VRD-RA2EE225J	J	2.2M 1/4W Carbon	AA
⚠ R714	VRD-RA2BE184J	J	180k 1/8W Carbon	AA
⚠ R715	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
⚠ R716	VRD-RA2EE180J	J	18 1/4W Carbon	AA
⚠ R717	VRD-RA2BE101J	J	100 1/8W Carbon	AA
⚠ R718	VRN-VV3ABR22J	J	0.22 1W Metal Film	AA
⚠ R719	VRC-UA2HG825K	J	8.2M 1/2W Solid	AA
⚠ R720	VRC-UA2HG825K	J	8.2M 1/2W Solid	AA
⚠ R723	VRS-SV3LB272J	J	2.7k 3W Metal Oxide	AD
⚠ R724	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
⚠ R726	VRD-RM2HD184J	J	180k 1/2W Carbon	AA
⚠ R728	VRD-RM2HD184J	J	180k 1/2W Carbon	AA
⚠ R729	VRD-RM2HD1R0J	J	1 1/2W Carbon	AA
⚠ R731	RR-XZ0016CEZZ	J	1 1/2W Fuse Resistor	AB
R800	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R803	VRD-RA2BE182J	J	1.8k 1/8W Carbon	AA
R809	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R811	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R812	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R816	VRD-MN2BE821J	J	820 1/8W Carbon	AA

PWB-A DUNTK7500WEX6
MOTHER UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R817	VRD-MN2BE561J	J	560 1/8W Carbon	AA
R818	VRD-MN2BE561J	J	560 1/8W Carbon	AA
R819	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R825	VRD-MN2BE333J	J	33k 1/8W Carbon	AA
R828	VRD-MN2BE683J	J	68k 1/8W Carbon	AA
R829	VRD-MN2BE104J	J	100k 1/8W Carbon	AA
R832	VRD-MN2BE271J	J	270 1/8W Carbon	AA
R833	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
R837	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R838	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R839	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R840	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R841	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R842	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R843	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R844	VRD-RM2HD102J	J	1k 1/2W Carbon	AA
R847	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R849	VRD-MN2BE183J	J	18k 1/8W Carbon	AA
R902	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R1001	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1002	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1003	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1004	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1005	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R1006	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1007	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1008	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1009	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1010	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1011	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1013	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1014	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R1015	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1016	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R1017	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R1019	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1022	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R1023	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R1024	VRD-RA2BE563J	J	56k 1/8W Carbon	AA
R1025	VRD-RA2BE683J	J	68k 1/8W Carbon	AA
R1026	VRD-MN2BE333J	J	33k 1/8W Carbon	AA
R1028	VRD-MN2BE684J	J	680k 1/8W Carbon	AA
R1029	VRD-MN2BE333J	J	33k 1/8W Carbon	AA
R1030	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R1031	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1032	VRS-VV3DB153J	J	15k 2W Metal Oxide	AA
R1035	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1036	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R1038	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1039	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1040	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1041	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
R1042	VRD-MN2BE682J	J	6.8k 1/8W Carbon	AA
R1043	VRD-MN2BE562J	J	5.6k 1/8W Carbon	AA
R1044	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1047	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1049	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1050	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1051	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R1052	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1053	VRD-RA2BE332J	J	3.3k 1/8W Carbon	AA
R1054	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1055	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R1056	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1057	VRD-MN2BE682J	J	6.8k 1/8W Carbon	AA
R1060	VRD-RA2EE471J	J	470 1/4W Carbon	AA
R1061	VRD-RA2EE181J	J	180 1/4W Carbon	AA
R1062	VRD-RA2EE681J	J	680 1/4W Carbon	AA
R1063	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1064	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R1065	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R1067	VRD-RA2EE821J	J	820 1/4W Carbon	AA
R1068	VRD-RA2EE270J	J	27 1/4W Carbon	AA
R1069	VRD-RA2EE391J	J	390 1/4W Carbon	AA
R1073	VRD-RU2EE562J	J	5.6k 1/4W Carbon	AA
R1074	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1082	VRS-VV3DB470J	J	47 2W Metal Oxide	AA
R1086	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R1087	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R1089	VRD-RA2BE103J	J	10k 1/8W Carbon	AA

SWITCHES

Ref. No.	Part No.	★	Description	Code
S502	QSW-B0015CEZZ	J	Service Switch	AC
⚠ S701	QSW-P0566CEZZ	J	Power	AL
⚠ S1001	QSW-K0076CEZZ	J	Channel (+)	AB
⚠ S1002	QSW-K0076CEZZ	J	Channel (−)	AB
⚠ S1003	QSW-K0076CEZZ	J	Volume (+)	AB
⚠ S1004	QSW-K0076CEZZ	J	Volume (−)	AB
⚠ S1005	QSW-K0076CEZZ	J	P-Mode	AB
⚠ S1006	QSW-K0076CEZZ	J	Pre-Set	AB
⚠ S1007	QSW-K0076CEZZ	J	Skip	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
FB603	RBLN-0018CEZZ	J	Ferrite Bead	AB
⚠ FB701	RBLN-0037CEZZ	J	Ferrite Bead	AB
⚠ FB702	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB731	RBLN-0037CEZZ	J	Ferrite Bead	AB
⚠ FH701	QFSHD1009CEZZ	J	Fuse Holder	AA
⚠ FH702	QFSHD1010CEZZ	J	Fuse Holder	AA
F300	QFS-J4021CEZZ	J	IC Protector	AE
⚠ F701	QFS-C3224CEZZ	J	Fuse, T3.15A	AD

Ref. No.	Part No.	★	Description	Code

PWB-A DUNTK7500WEX6
MOTHER UNIT (Continued)

MISCELLANEOUS PARTS (Continued)

P306	QPLGN0261CEZZ	J	Plug 2-pin, (YA)	AB
P401	QPLGN0561CEZZ	J	Plug 5-pin, (Y)	AB
P502	QPLGN0505CEZZ	J	Plug 5-pin, (F)	AB
P602	QPLGN0461CEZZ	J	Plug 4-pin, (H)	AB
⚠ P711	QPLGN0207CEZZ	J	Plug 2-pin, (G)	AA
⚠ P712	QPLGN0304CEZZ	J	Plug 3-pin, (A)	AB
P801	QPLGN0561CEZZ	J	Plug 5-pin, (K)	AB
P1001	QPLGN0761CEZZ	J	Plug 7-pin, (I)	AD
P1002	QPLGN0361CEZZ	J	Plug 3-pin, (IA)	AB
P1003	QPLGN0761CEZZ	J	Plug 7-pin, (NA)	AD
P1004	QPLGN0661CEZZ	J	Plug 6-pin, (NB)	AB
P1005	QPLGN0361CEZZ	J	Plug 3-pin, (SB)	AB
P1007	QPLGN0579GEZZ	J	Plug 5-pin, (ME)	AB
RMC1001	RRMCU0195CEZZ	J	Remote Control Receiver	AK
	LHLDP1017PE00	R	LED Holder	AB

—— End of PWB-A ——

PWB-B DUNTK6851WEZ3
CRT SOCKET UNIT

TRANSISTORS

Q851	VS2SC2229O/1E	J	2SC2229(O)	AD
Q852	VS2SC2229O/1E	J	2SC2229(O)	AD
Q853	VS2SC2229O/1E	J	2SC2229(O)	AD
Q854	VS2SA1015Y/1E	J	2SA1015(Y)	AC

DIODE

D851	VHD1SS119//1E	J	1SS119	AA

COIL

L851	VP-CF681K0000	J	680μH	AB

CONTROLS

R853	RVR-B4568CEZZ	J	10k(B) Red Bias	AC
R857	RVR-B5015CEZZ	J	1k(B) Green Drive	AC
R859	RVR-B4568CEZZ	J	10k(B) Green Bias	AC
R863	RVR-B5015CEZZ	J	1k(B) Blue Drive	AC
R865	RVR-B4568CEZZ	J	10k(B) Blue Bias	AC

Ref. No.	Part No.	★	Description	Code

CAPACITORS

C851	VCKYD41HB391K	J	390p 50V Ceramic	AA
C852	VCKYD41HB331K	J	3300p50V Ceramic	AA
C853	VCKYD41HB391K	J	390p 50V Ceramic	AA
C854	RC-KZ015JCEZZ	J	0.01 1.5kVCeramic	AB
C860	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C861	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C866	VCEAGA2DW106M	J	10 200V Electrolytic	AC
C870	VCEAGA1CW476M	J	47 16V Electrolytic	AB

RESISTORS

R851	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
R852	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R853	*See Controls*			
R855	VRD-RM2HD272J	J	2.7k 1/2W Carbon	AA
R856	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R857	*See Controls*			
R858	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R859	*See Controls*			
R860	VRS-VV3DB123J	J	12k 2W Metal Oxide	AA
R861	VRD-RM2HD272J	J	2.7k 1/2W Carbon	AA
R862	VRD-RA2BE561J	J	560 1/8W Carbon	AA
R863	*See Controls*			
R864	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R865	*See Controls*			
R866	VRS-VV3DB123J	J	12k 2W Metal Oxide	AA
R867	VRD-RM2HD272J	J	2.7k 1/2W Carbon	AA
R868	VRS-VV3DB123J	J	12k 2W Metal Oxide	AA
R872	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R873	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R874	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R878	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R879	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R880	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R881	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA

MISCELLANEOUS PARTS

CN851	QCNW-1341PEZZ	R	Connecting Cord, (H)	AF
CN852	QCNW-1342PEZZ	R	Connecting Cord, (K)	AF
P851	QPLGN0361CEZZ	J	Plug 3-pin, (H)	AB
P852	QPLGN0561CEZZ	J	Plug 5-pin, (K)	AB
⚠ SC851	QSOCV0829CEZZ	J	CRT Socket	AK

—— End of PWB-B ——

PWB-C DUNTK7493WEW6
AV UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC1301	VHiTA7347P/-1	J	TV/EXT Audio Switch	AG
IC1302	VHiTA7347P/-1	J	TV/EXT Audio Switch	AG
IC1303	RH-iX0257CEZZ	J	Operational Amp.	AF
IC1304	VHiTA7348P/-1	J	FM/IGR/NICAM Switch	AK
IC1305	VHiTA7348P/-1	J	FM/IGR/NICAM Switch	AK
IC1306	VHiMPC1891Y-1	J	Surround Processor	AP
IC1307	VHiM51523AL-1	J	Balance/Volume Control	AH
IC1308	VHiTDA7057Q-1	J	Audio Output Amp.	AV
IC1401	VHiTA7347P/-1	J	TV/EXT Audio Switch	AG
IC1451	VHiTA7347P/-1	J	4.5MHz Trap Switch	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q1301	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1302	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1401	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1402	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1403	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1451	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1453	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1454	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1455	VS2SC945AP/-1	J	2SC945A(P)	AB
Q1456	VS2SC1815GW-1	J	2SC1815(GW)	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D1301	RH-EX0041TAZZ	J	Zener Diode	AC
D1302	RH-EX0041TAZZ	J	Zener Diode	AC
D1303	RH-EX0041TAZZ	J	Zener Diode	AC
D1304	RH-EX0041TAZZ	J	Zener Diode	AC
D1305	VHD1SS119//1E	J	1SS119	AA
D1306	VHD1SS119//1E	J	1SS119	AA
D1401	RH-EX0041TAZZ	J	Zener Diode	AC
D1402	RH-EX0041TAZZ	J	Zener Diode	AC

COILS AND TRANSFOMERS

Ref. No.	Part No.	★	Description	Code
CF1451	RFiLC0013CEZZ	J	Ceramic Filter, 4.5MHz	AE
CF1452	RFiLC0024CEZZ	J	Ceramic Filter, 6.5MHz	AE
CF1453	RFiLC0150CEZZ	J	Ceramic Filter, 5.5MHz / 6.0MHz	AF
L1451	VP-DF150K0000	J	Coil, 15μH	AB
L1452	VP-XF150K0000	J	Coil, 15μH	AB
L1453	VP-XF150K0000	J	Coil, 15μH	AB
L1454	VP-DF6R8K0000	J	Coil, 6.8μH	AB

CAPACITORS

Ref. No.	Part No.	★			Description	Code
C1301	VCKYPA1HB102K	J	1000p	50V	Ceramic	AA
C1302	VCKYPA1HB102K	J	1000p	50V	Ceramic	AA
C1303	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1304	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1305	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C1306	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C1307	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1308	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1309	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1310	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C1311	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1312	VCEAGA1CW106M	J	10	16V	Electrolytic	AB
C1313	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1314	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1315	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1316	VCEAGA1CW227M	J	220	16V	Electrolytic	AA
C1317	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1318	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1319	VCEAGA1CW226M	J	22	16V	Electrolytic	AB
C1320	VCFYHA1HA823J	J	0.082	50V	M. Polyester	AA
C1321	VCEAGA1CW337M	J	330	16V	Electrolytic	AC
C1322	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1323	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1324	VCQYTA1HM223J	J	0.022	50V	Mylar	AA
C1325	VCQYTA1HM223J	J	0.022	50V	Mylar	AA
C1326	VCQYSH1HM222K	J	2200p	50V	Mylar	AA
C1327	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C1328	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1329	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1330	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1331	VCE9AA1HW105M	J	1	50V	Elect. (N.P)	AB
C1332	VCE9AA1HW105M	J	1	50V	Elect. (N.P)	AB
C1333	VCEAGA1CW337M	J	330	16V	Electrolytic	AC
C1334	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1335	VCEAGA1AW477M	J	470	10V	Electrolytic	AB
C1336	VCEAGA1CW336M	J	33	16V	Electrolytic	AB
C1337	VCEAGA1CW336M	J	33	16V	Electrolytic	AB
C1338	VCFYHA1HA224J	J	0.22	50V	M. Polyester	AC
C1339	VCFYHA1HA224J	J	0.22	50V	M. Polyester	AC
C1340	VCQYTA1HM473J	J	0.047	50V	Mylar	AA
C1341	VCQYTA1HM473J	J	0.047	50V	Mylar	AA
C1342	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1343	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1344	VCEAGA1EW477M	J	470	25V	Electrolytic	AD
C1345	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C1346	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C1347	VCEAGA1EW475M	J	4.7	25V	Electrolytic	AA
C1351	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C1352	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C1355	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1357	VCKYD41HB101K	J	100p	50V	Ceramic	AA
C1401	VCEAGA0JW477M	J	470	6.3V	Electrolytic	AB
C1402	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C1403	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA

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AV UNIT (Continued)

CAPACITORS (Continued)

Ref. No.	Part No.	★			Description	Code
C1404	VCEAGA1CW107M	J	100	16V	Electrolytic	AB
C1405	VCEAGA1CW107M	J	100	16V	Electrolytic	AB
C1407	VCE9AA1CW106M	J	10	16V	Elect. (N.P)	AB
C1408	VCEAGA1CW107M	J	100	16V	Electrolytic	AB
C1409	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C1410	VCEAGA0JW477M	J	470	6.3V	Electrolytic	AB
C1411	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C1412	VCCCPA1HH470J	J	47p	50V	Ceramic	AA
C1452	VCKYPA1HB331K	J	330p	50V	Ceramic	AA
C1454	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C1455	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C1456	VCCCPA1HH820J	J	82p	50V	Ceramic	AA
C1457	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C1458	VCE9AA1CW106M	J	10	16V	Elect. (N.P)	AB
C1459	VCE9AA1CW106M	J	10	16V	Elect. (N.P)	AB
C1460	VCEAGA1CW476M	J	47	16V	Electrolytic	AB

RESISTORS

Ref. No.	Part No.	★			Description	Code
R1301	VRD-RA2BE332J	J	3.3k	1/8W	Carbon	AA
R1302	VRD-RA2BE332J	J	3.3k	1/8W	Carbon	AA
R1303	VRD-RA2BE224J	J	220k	1/8W	Carbon	AA
R1304	VRD-RA2BE224J	J	220k	1/8W	Carbon	AA
R1305	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1306	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1307	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R1308	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R1309	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R1310	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R1311	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R1312	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R1313	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R1314	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
⚠ R1315	RR-XZ0026CEZZ	J	10	1/4W	Fuse Resistor	AB
R1316	VRD-RA2BE824J	J	820k	1/8W	Carbon	AA
R1317	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R1318	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1319	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R1320	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
R1321	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1322	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1323	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1324	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1325	VRD-RA2BE681J	J	680	1/8W	Carbon	AA
R1326	VRD-RA2BE681J	J	680	1/8W	Carbon	AA
R1327	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R1328	VRD-RA2BE121J	J	120	1/8W	Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★			Description	Code
R1329	VRD-RA2BE153J	J	15k	1/8W	Carbon	AA
R1330	VRD-RA2BE153J	J	15k	1/8W	Carbon	AA
R1331	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1332	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1333	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1334	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1335	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1336	VRD-RA2BE333J	J	33k	1/8W	Carbon	AA
R1337	VRD-RA2BE333J	J	33k	1/8W	Carbon	AA
R1338	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1339	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1340	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1341	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R1342	VRD-RA2BE824J	J	820k	1/8W	Carbon	AA
R1343	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1344	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1401	VRD-RA2EE121J	J	120	1/4W	Carbon	AA
R1402	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R1403	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1404	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R1405	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R1406	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
⚠ R1407	RR-XZ0026CEZZ	J	10	1/4W	Fuse Resistor	AB
R1408	VRD-RA2BE222J	J	2.2k	1/8W	Carbon	AA
⚠ R1411	RR-XZ0026CEZZ	J	10	1/4W	Fuse Resistor	AB
R1412	VRD-RM2HD221J	J	220	1/2W	Carbon	AA
R1413	VRD-RA2EE680J	J	68	1/4W	Carbon	AA
R1414	VRD-RA2BE271J	J	270	1/8W	Carbon	AA
R1418	VRD-RA2BE330J	J	33	1/8W	Carbon	AA
R1452	VRD-RA2EE391J	J	390	1/4W	Carbon	AA
R1454	VRD-RA2BE391J	J	390	1/8W	Carbon	AA
R1455	VRD-RA2EE471J	J	470	1/4W	Carbon	AA
R1456	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA
R1458	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R1459	VRD-RA2BE681J	J	680	1/8W	Carbon	AA
R1460	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R1461	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R1463	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1464	VRD-RA2BE271J	J	270	1/8W	Carbon	AA
R1465	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R1466	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
⚠ R1467	RR-XZ0026CEZZ	J	10	1/4W	Fuse Resistor	AB
R1468	VRD-RA2BE222J	J	2.2k	1/8W	Carbon	AA
R1469	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R1470	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R1471	VRD-RA2BE330J	J	33	1/8W	Carbon	AA
R1472	VRD-RA2BE330J	J	33	1/8W	Carbon	AA
R1473	VRD-RA2BE100J	J	10	1/8W	Carbon	AA

Ref. No.	Part No.	★	Description	Code

PWB-C DUNTK7493WEW6
AV UNIT (Continued)

MISCELLANEOUS PARTS

CN401	QCNW-1471PEZZ	R	Connecting Cord	AX
⚠J1301	QTANJ0617CEZZ	J	AV Terminal	AH
P1301	QPLGN0261CEZZ	J	Plug 2-pin, (YA)	AB
P1302	QPLGN0461CEZZ	J	Plug 4-pin, (YB)	AB
P1303	QPLGN0761CEZZ	J	Plug 7-pin, (I)	AD
P1304	QPLGN0361CEZZ	J	Plug 3-pin, (IA)	AB
P1305	QPLGN0361CEZZ	J	Plug 3-pin, (SB)	AB
P1306	QPLGN0461CEZZ	J	Plug 4-pin, (SS)	AB
P1401	QPLGN0561CEZZ	J	Plug 5-pin, (Y)	AB

—— End of PWB-C ——

PWB-D DUNTK7494WEV0
SIF CONVERTER UNIT

INTEGRATED CIRCUIT

IC2301	RH-iX0776CEZZ	J	5.5MHz Converter	AN

TRANSISTOR

Q2301	VS2SA1015Y/1E	J	2SA1015(Y)	AC

COILS

CF2301	RFiLA0023CEZZ	J	Ceramic Filter	AF
CF2302	RFiLA0024CEZZ	J	Ceramic Filter	AF
CF2303	RFiLA0025CEZZ	J	Ceramic Filter	AF
CF2304	RFiLC0144CEZZ	J	Ceramic Filter	AD
CF2305	RFiLC0145CEZZ	J	Ceramic Filter	AE
CF2306	RFiLC0029TAZZ	J	Ceramic Filter	AD
CF2307	RFiLC0029TAZZ	J	Ceramic Filter	AD
L2301	VP-DF180K0000	J	Coil, 18μH	AB
L2303	VP-DF8R2K0000	J	Coil, 8.2μH	AB
L2304	VP-DF6R8K0000	J	Coil, 6.8μH	AB

Ref. No.	Part No.	★	Description	Code

CAPACITORS

C2301	VCCCPA1HH470J	J	47p	50V	Ceramic	AA
C2302	VCCCPA1HH101J	J	100p	50V	Ceramic	AA
C2303	VCCCPA1HH101J	J	100p	50V	Ceramic	AA
C2304	VCFYHA1HA683J	J	0.068	50V	M. Polyester	AB
C2305	VCCCPA1HH330J	J	33p	50V	Ceramic	AA
C2306	VCQYSH1HM102K	J	1000p	50V	Mylar	AA
C2307	VCQYTA1HM103J	J	0.01	50V	Mylar	AA
C2308	VCQYSH1HM103K	J	0.01	50V	Mylar	AA
C2309	VCQYSH1HM102K	J	1000p	50V	Mylar	AA
C2310	VCEAGA1HW104M	J	0.1	50V	Electrolytic	AA
C2311	VCFYHA1HA823J	J	0.082	50V	M. Polyester	AA
C2313	VCEAGA1HW104M	J	0.1	50V	Electrolytic	AA
C2314	VCEAGA1HW104M	J	0.1	50V	Electrolytic	AA
C2315	VCCCPA1HH101J	J	100p	50V	Ceramic	AA
C2316	VCCCPA1HH101J	J	100p	50V	Ceramic	AA
C2317	VCCCPA1HH470J	J	47p	50V	Ceramic	AA
C2318	VCEAGA1CW107M	J	100	16V	Electrolytic	AB
C2319	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C2320	VCKYD41CY103N	J	0.01	16V	Ceramic	AA

RESISTORS

R2301	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R2302	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R2303	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R2304	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R2305	VRD-RA2BE333J	J	33k	1/8W	Carbon	AA
R2306	VRD-RA2BE332J	J	3.3k	1/8W	Carbon	AA
R2307	VRD-RA2BE122J	J	1.2k	1/8W	Carbon	AA
R2309	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R2310	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R2311	VRD-RA2EE105J	J	1M	1/4W	Carbon	AA
R2315	VRD-RA2EE105J	J	1M	1/4W	Carbon	AA
R2316	VRD-RA2EE105J	J	1M	1/4W	Carbon	AA
R2317	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R2318	VRD-RA2BE332J	J	3.3k	1/8W	Carbon	AA
R2319	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R2320	VRD-RA2EE105J	J	1M	1/4W	Carbon	AA
R2321	VRD-RA2EE105J	J	1M	1/4W	Carbon	AA
R2322	VRD-RA2BE221J	J	220	1/8W	Carbon	AA

MISCELLANEOUS PART

P2301	QPLGZ0707GEZZ	J	Plug 7-pin, (MC)	AB

—— End of PWB-D ——

PWB-E DUNTK7491WEV1
IGR UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC2100	VHiTDA3857/-1	J	SIF Detector	AR

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q2100	VS2SC1906//1E	J	2SC1906	AC
Q2102	VS2SC945AP/-1	J	2SC945A(P)	AB

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
L2100	VP-DF100K0000	J	Coil, 10μH	AB
L2101	VP-DF100K0000	J	Coil, 10μH	AB
L2102	VP-DF100K0000	J	Coil, 10μH	AB
L2104	VP-XF2R2M0000	J	Coil, 2.2μH	AB
SF2100	RFiLC0260CEZZ	J	Surface Accoustic Wave Filter	AL
T2102	RCiLD0057GEZZ	J	38.9MHz Tank	AE

CAPACITORS

Ref. No.	Part No.	★				Code
C2100	VCCCPA1HH101J	J	100p	50V	Ceramic	AA
C2101	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C2102	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C2103	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C2104	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C2105	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C2106	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C2107	VCCSD41HL270J	J	27p	50V	Ceramic	AA
C2108	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C2109	VCEAGA1HW225M	J	2.2	50V	Electrolytic	AB
C2110	VCEAGA1HW225M	J	2.2	50V	Electrolytic	AB
C2111	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C2112	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C2113	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C2114	VCQYTA1HM102J	J	1000p	50V	Mylar	AA
C2116	VCQYTA1HM102J	J	1000p	50V	Mylar	AA
C2117	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C2125	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA

RESISTORS

Ref. No.	Part No.	★				Code
R2100	VRD-RA2BE222J	J	2.2k	1/8W	Carbon	AA
R2101	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2102	VRD-RA2BE2R2J	J	2.2	1/8W	Carbon	AA
R2103	VRD-RA2BE151J	J	150	1/8W	Carbon	AA
R2104	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R2106	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA
R2107	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★				Code
R2108	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R2109	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R2110	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R2113	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R2114	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2115	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R2119	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R2120	VRD-RA2BE560J	J	56	1/8W	Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P2101	QPLGZ0407GEZZ	J	Plug 4-pin, (MA)	AB
P2102	QPLGZ0607GEZZ	J	Plug 6-pin, (MB)	AC
P2103	QPLGN0261CEZZ	J	Plug 2-pin, (NI)	AB

—— End of PWB-E ——

PWB-F —— *Not Used* ——

PWB-G DUNTK7492WEV3
NICAM UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC5001	RH-iX1847CEZZ	J	DSS Control, M50725-122SP	AP
IC5002	VHiPST529C2-1	J	PST529C	AD
IC5003	VHiTA8662N/-1	J	Quadrant Phase Shift Keying	AZ
IC5004	VHiTC6011N/-1	J	MPX Broadcasting	BD
IC5005	VHiM5165P10-1	J	Memory	AV
IC5006	VHiUPC358C/-1	J	Operational Amp.	AD
IC5007	RH-iZ0167GEZZ	J	Ope. Amp., HAF0142	AQ
IC5008	RH-iZ0167GEZZ	J	Ope. Amp., HAF0142	AQ
IC5009	VHiTD6710AN-1	J	D/A Converter	AT
IC5010	VHiUPC358C/-1	J	Operational Amp.	AD
IC5011	VHiUPC78L05-4	J	5V Regulator	AD

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q5000	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q5001	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q5002	VS2SC2236Y/-1	J	2SC2236	AD
Q5003	VS2SC945AP/-1	J	2SC945A(P)	AB
Q5004	VS2SC1815GW-1	J	2SC1815(GW)	AB
Q5005	VS2SC945AP/-1	J	2SC945A(P)	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D5000	VHD1SS119//1E	J	1SS119	AA
D5002	VHD1SS119//1E	J	1SS119	AA
D5003	RH-EX0159GEZZ	J	Zener Diode	AA

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
X5000	RCRSB0131CEZZ	J	Crystal	AH
X5001	RCRSB0132CEZZ	J	Crystal	AH

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
CF5000	RFiLA0044CEZZ	J	Ceramic Filter	AD
CF5001	RFiLA0043CEZZ	J	Ceramic Filter	AE
L5000	VP-DF3R3K0000	J	Coil, 3.3μH	AB
L5001	VP-DF150K0000	J	Coil, 15μH	AB
L5002	VP-DF150K0000	J	Coil, 15μH	AB
L5005	VP-DU681K0000	J	Coil, 680μH	AB
L5006	VP-DU681K0000	J	Coil, 680μH	AB
L5007	VP-DF3R3K0000	J	Coil, 3.3μH	AB
L5008	VP-DF150K0000	J	Coil, 15μH	AB
L5009	VP-XF330K0000	J	Coil, 33μH	AB
T5000	RCiLV0165CEZZ	J		AT

CAPACITORS

Ref. No.	Part No.	★				Code
C5001	VCEAGA0JW107M	J	100	6.3V	Electrolytic	AB
C5002	VCEAGA1HW474M	J	0.47	50V	Electrolytic	AA
C5003	VCEAGA1HW475M	J	4.7	50V	Electrolytic	AB
C5004	VCKYPA1HB221K	J	220p	50V	Ceramic	AA
C5005	VCKYPA1HB221K	J	220p	50V	Ceramic	AA
C5006	VCEAGA1HW105M	J	1	50V	Electrolytic	AC
C5007	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5008	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C5009	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C5010	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5011	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5012	VCEAGA1HW474M	J	0.47	50V	Electrolytic	AA
C5013	VCQYTA1HM103J	J	0.01	50V	Mylar	AA
C5014	VCEAGA1HW474M	J	0.47	50V	Electrolytic	AA
C5015	VCEAGA1HW474M	J	0.47	50V	Electrolytic	AA
C5016	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C5017	VCEAGA1CW336M	J	33	16V	Electrolytic	AB
C5018	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C5019	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C5020	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C5021	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C5022	RTO-H0010TAZZ	J	Trimmer Capacitor			AE
C5023	VCCCPA1HH100D	J	10p	50V	Ceramic	AA
C5024	VCCCPA1HH560J	J	56p	50V	Ceramic	AA
C5025	VCCSD41HL180J	J	18p	50V	Ceramic	AA
C5026	VCCSD41HL180J	J	18p	50V	Ceramic	AA
C5027	VCCSD41HL180J	J	18p	50V	Ceramic	AA
C5028	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C5029	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C5030	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5031	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5032	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5033	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5034	VCKYPA1HF103Z	J	0.01	50V	Ceramic	AA
C5035	VCCCPA1HH151J	J	150p	50V	Ceramic	AA
C5036	VCCCPA1HH151J	J	150p	50V	Ceramic	AA
C5037	VCEAGA1HW474M	J	0.47	50V	Electrolytic	AA
C5038	VCQYTA1HM103J	J	0.01	50V	Mylar	AA
C5039	RTO-H1048GEZZ	J	Trimmer Capacitor			AC
C5040	VCCCPA1HH180J	J	18p	50V	Ceramic	AA
C5041	VCCCPA1HH560J	J	56p	50V	Ceramic	AA
C5042	VCCCPA1HH180J	J	18p	50V	Ceramic	AA
C5043	VCCCPA1HH150J	J	15p	50V	Ceramic	AA
C5044	VCCCPA1HH150J	J	15p	50V	Ceramic	AA
C5045	VCCCPA1HH150J	J	15p	50V	Ceramic	AA
C5046	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C5047	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5048	VCEAGA1HW475M	J	4.7	50V	Electrolytic	AB
C5049	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5050	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C5051	VCEAGA1HW475M	J	4.7	50V	Electrolytic	AB
C5052	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5053	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5054	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5055	VCEAGA1CW476M	J	47	16V	Electrolytic	AB

PWB-G DUNTK7492WEV3
NICAM UNIT (Continued)

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description			Code
C5056	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5057	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C5058	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5059	VCFYHA1HA104J	J	0.1	50V	M. Polyester	AB
C5060	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C5061	VCEAGA1HW335M	J	3.3	50V	Electrolytic	AB
C5062	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C5063	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C5064	VCEAGA0JW476M	J	47	6.3V	Electrolytic	AB
C5065	VCKYD41CY103N	J	0.01	16V	Ceramic	AA
C5066	VCEAGA1HW335M	J	3.3	50V	Electrolytic	AB
C5067	VCCCPA1HH220J	J	22p	50V	Ceramic	AA
C5068	VCCCPA1HH220J	J	22p	50V	Ceramic	AA
C5069	RC-QZA681TAYJ	J	680p		Mylar	AA
C5070	VCEAGA0JW476M	J	47	6.3V	Electrolytic	AB
C5071	VCEAGA0JW107M	J	100	6.3V	Electrolytic	AB
C5072	VCKYPA1HB122K	J	1200p	50V	Ceramic	AA
C5073	VCEAGA0JW227M	J	220	6.3V	Electrolytic	AB
C5074	VCKYPA1HB122K	J	1200p	50V	Ceramic	AA
C5075	VCEAGA0JW476M	J	47	6.3V	Electrolytic	AB
C5076	RC-QZA681TAYJ	J	680p		Mylar	AA
C5077	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C5078	VCEAGA1CW106M	J	10	16V	Electrolytic	AA

RESISTORS

Ref. No.	Part No.	★	Description			Code
R5001	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R5002	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R5003	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R5004	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R5005	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R5006	VRD-RA2BE101J	J	100	1/8W	Carbon	AA
R5007	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R5008	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5009	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5010	VRD-RA2BE473J	J	47k	1/8W	Carbon	AA
R5011	VRD-RA2BE562J	J	5.6k	1/8W	Carbon	AA
R5012	VRD-RA2BE105J	J	1M	1/8W	Carbon	AA
R5013	VRD-RA2BE562J	J	5.6k	1/8W	Carbon	AA
R5016	VRD-RA2BE151J	J	150	1/8W	Carbon	AA
R5020	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R5021	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R5022	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R5023	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5024	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5025	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5026	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5027	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5028	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5029	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5030	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5031	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5032	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5033	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5034	VRD-RA2HD561J	J	560	1/2W	Carbon	AA
R5035	VRD-RA2BE393J	J	39k	1/8W	Carbon	AA
R5036	VRD-RA2BE154J	J	150k	1/8W	Carbon	AA
R5037	VRD-RA2BE224J	J	220k	1/8W	Carbon	AA
R5038	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
R5039	VRD-RA2BE271J	J	270	1/8W	Carbon	AA
R5040	VRD-RA2BE562J	J	5.6k	1/8W	Carbon	AA
R5041	VRD-RA2BE120J	J	12	1/8W	Carbon	AA
R5042	VRD-RA2BE271J	J	270	1/8W	Carbon	AA
R5043	VRD-RA2BE272J	J	2.7k	1/8W	Carbon	AA
R5044	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R5045	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R5046	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R5047	VRD-RA2BE393J	J	39k	1/8W	Carbon	AA
R5048	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R5049	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R5050	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R5051	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA
R5052	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA
R5053	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R5054	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R5055	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R5057	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5058	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5060	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R5061	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R5062	VRD-RA2BE392J	J	3.9k	1/8W	Carbon	AA
R5063	VRD-RA2BE391J	J	390	1/8W	Carbon	AA
R5064	VRD-RA2BE391J	J	390	1/8W	Carbon	AA
R5065	VRD-RA2BE392J	J	3.9k	1/8W	Carbon	AA
R5066	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R5067	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA
R5068	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R5069	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA
R5070	VRD-RA2BE333J	J	33k	1/8W	Carbon	AA
R5071	VRD-RA2BE333J	J	33k	1/8W	Carbon	AA
R5072	VRD-RA2BE683J	J	68k	1/8W	Carbon	AA
R5073	VRD-RA2BE273J	J	27k	1/8W	Carbon	AA
R5074	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R5075	VRD-RA2BE103J	J	10k	1/8W	Carbon	AA
R5076	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R5079	VRD-RA2BE102J	J	1k	1/8W	Carbon	AA
R5080	VRD-RU2EE103J	J	10k	1/4W	Carbon	AA
⚠ R5081	RR-XZ0026CEZZ	J	10	1/4W	Fuse Resistor	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.		Description	Code
P5001	QPLGN0661CEZZ	J	Plug 6-pin, (NB)	AD
P5002	QPLGN0761CEZZ	J	Plug 7-pin, (NA)	AD
P5004	QPLGN0261CEZZ	J	Plug 2-pin, (NI)	AB
P5005	QPLGN0461CEZZ	J	Plug 4-pin, (YB)	AB

—— End of PWB-G ——

Ref. No.	Part No.	★	Description	Code

PWB-H DUNTK7499WEV1
LED UNIT

DIODES

D1027	RH-PX0095CEZZ	J	LED, FM Indicator (Red) / NICAM Indicator (Green)	AE

MISCELLANEOUS PARTS

SC1007	QSOCN0579GEZZ	J	Socket 5-pin, (ME)	AC
	LHLDP1015PEK0	J	LED Holder	AD

—— End of PWB-H ——

MISCELLANEOUS PARTS

	VSP0080PBH1WA	R	Speaker, 8 cm Round x2 used	AS
	LHLDK0001PEZZ	R	AC Cord Holder	AC
⚠	QACCZ3003PEZZ	R	AC Cord	AQ
	QCNW-1492PEZZ	R	Connecting Cord, (SS)	AH

—— End of MISCELLANEOUS PARTS ——

Ref. No.	Part No.	★	Description	Code

PACKING PARTS
(*NOT REPLACEMENT ITEM*)

SPAKC5774PEZZ	–	Packing Case	—
SPAKP0056PEZZ	–	Polystyrene Mat	—
SPAKX0375PEZZ	–	Buffer Material	—
TLABK0001PEZZ	–	Number Card	—

—— End of PACKING PARTS ——

SUPPLIED ACCESSORIES

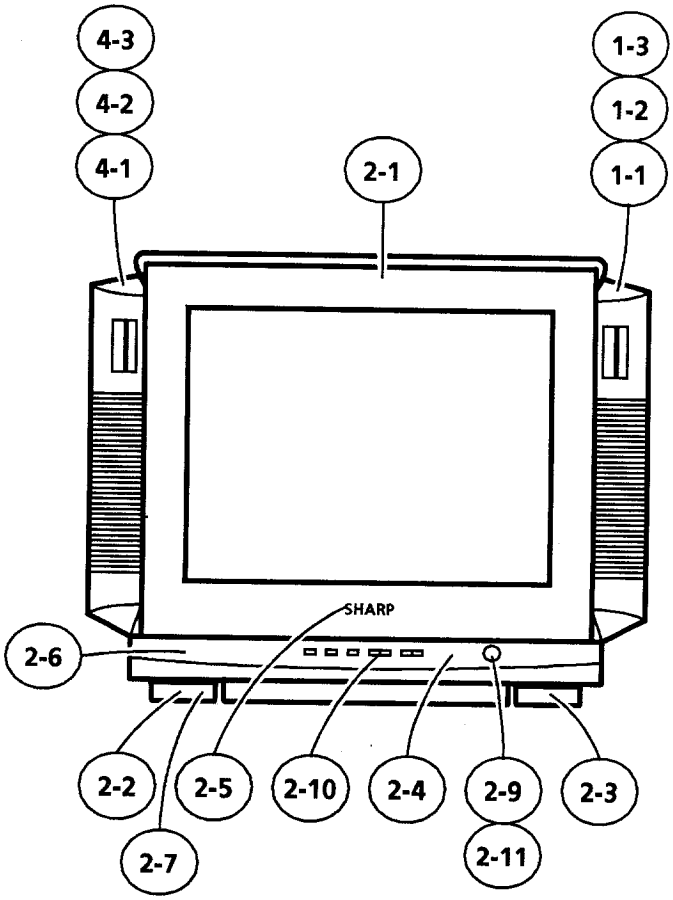
ACCESSORIES

QPLGA0011CEZZ	J	AC Plug Adaptor		AF
RRMCG0858PESA	R	Infrared R/C Unit		AY

ACCESSORIES (*NOT REPLACEMENT ITEM*)

TINS-5078PEZZ	–	Operation Manual	—
TMAPC3874PEZZ	–	Service Map	—
UBATU1032CCN1	–	Dry Batteries, Size AAA (2 pcs)	—

—— End of SUPPLIED ACCESSORIES ——



CABINET PARTS

Ref. No.	Part No.	★	Description	Code
1	*Not available*	–	Buffle Ass'y, Right	—
1-1	GBFL-1056CE00	R	Buffle	AG
1-2	LX-TZ3008CEFD	R	Screw, ×4 used	AA
1-3	VSP0080PBH1WA	R	Speaker, 8 cm, 8Ω	AS
2	CCABA2176WEV0	R	Cabinet Ass'y, Front	BH
2-1	*Not available*	–	Cabinet, Front	—
2-2	GLEGP9014PESA	B	Leg (Left)	AF
2-3	GLEGP9013PEESA	R	Leg (Right)	AF
2-4	GMADT0099PESA	R	Window Cover	AR
2-5	HBDGB3097CESA	R	Badge, "**SHARP**"	AG
2-6	HDECQ0027PEZZ	R	Decoration Plate, LED	AC
2-7	HDECP0005PESA	R	Decoration Plate, ×2 used	AD
2-8	—— *Not Used* ——			
2-9	JBTN-1761CESA	R	Button, Power	AD
2-10	JBTN-1762CESA	R	Buttons, Ch./Vol.	AE
2-11	MSPRC0009PEFW	R	Spring, Power Button	AB
3	GCABB2017CEKA	R	Cabinet, Rear	BF
4	*Not available*	–	Buffle Ass'y, Left	—
4-1	GBFL-1056CE00	R	Buffle	AG
4-2	LX-TZ3008CEFD	R	Screw, ×4 used	AA
4-3	VSP0080PBH1WA	R	Speaker, 8 cm, 8Ω	AS

—— End of CABINET PARTS ——

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